



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>











3-TOL  
+

MotorGoogle













# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 1

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, OCTOBER 2, 1918

Fifteen cents a copy  
Two dollars a year

"The arrival of Maxwell Truck at Columbus Circle, New York City, after its record breaking run from San Francisco. The entire trip was completed without a single plug adjustment, replacement or attention of any kind, in fact the plugs were not removed from the motor from start to finish."

Ray McNamara,  
Road Engineer.

## Champion

Dependable Spark Plugs

Dependability Again Shown  
Over 31 Mountain Ranges



Champion Maxwell, 7/8-18  
Price, \$1.00

THE irrefutable evidence of the dependability of Champion Spark Plugs continues to mount higher and higher.

Concerning the remarkable cross-continent run of the Champion equipped Maxwell Truck (3,428.7 miles in 17 days, 8 hours and 20 minutes) Ray McNamara, Road Engineer, says:

"It was not necessary to remove a spark plug from the motor from start to finish, which performance is very phenomenal when the 31 mountain ranges that are crossed are taken into consideration; these ranges vary from two to twelve miles of steady climbing, and the same distance prevails going down on the other side of the mountains, where it is necessary to use the motor

to help hold back the load on the steep grades."

An overwhelming majority of all American motors are equipped with Champion Spark Plugs, because every test and experience demonstrates again and again their superior efficiency and durability.

Champion Spark Plug Company, Toledo, Ohio

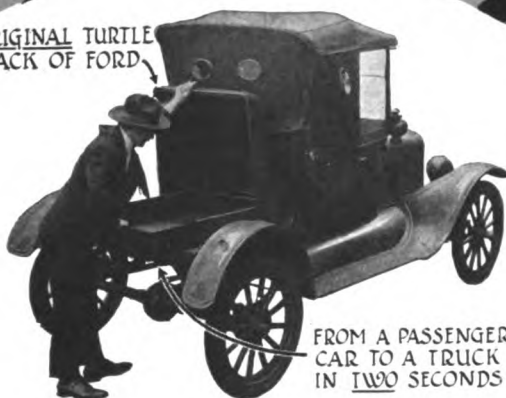
Canadian Office: Champion Spark Plug Company of Canada, Limited, Windsor, Ontario





UTILITY PUMPS  
for All Cars \$12.00.  
For Fords \$7.50

ORIGINAL TURTLE  
BACK OF FORD



FROM A PASSENGER  
CAR TO A TRUCK  
IN TWO SECONDS



UTILITY RIM  
WRENCH  
for All Cars \$1.75

## Haulage Conservation

with

## UTILITY Disappearing Truck Body for Fords

Every merchant, every tradesman, every farmer, every salesman who uses a Ford roadster can help relieve haulage congestion.

Get your Ford customers to install a UTILITY Truck Body. Tell them never to have anything delivered they can deliver themselves—to never use horses or a big truck where the Ford roadster will answer.

Have UTILITY Truck users get in touch with the Return Loads Bureau in their town, or organize one if necessary, and never go or come without a load—no matter how small.

Help UTILITY Truck users form a small rural express to pick up their neighbors' small shipments on the way to town, and bring back what they need.

Hauls any ½-ton load. Only 4 bolts used to attach. Acetylene welded throughout. Price \$38.50. Send for free descriptive pamphlet. Dealers: Order of your jobber.

### HILL PUMP VALVE CO.

Mfrs. of UTILITY Products

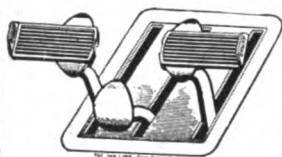
Archer Ave. and Canal St. Chicago

Sales Department

THE ZINKE CO., 1323 S. Michigan Ave.,  
Chicago



UTILITY PEDALS  
For Fords \$1.25



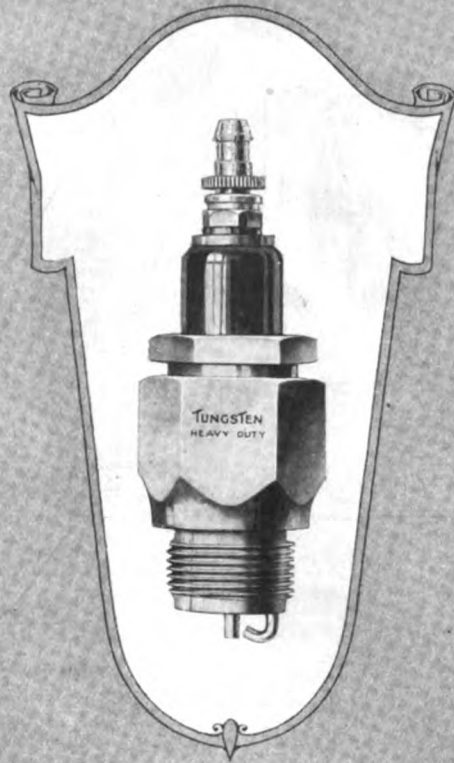
UTILITY UNIVERSAL  
WRENCH  
Set for All Cars \$3.50



UTILITY HEATERS  
for All Cars \$9.00 to \$25.00

# UTILITY Automotive Products

# "Always On the Job"

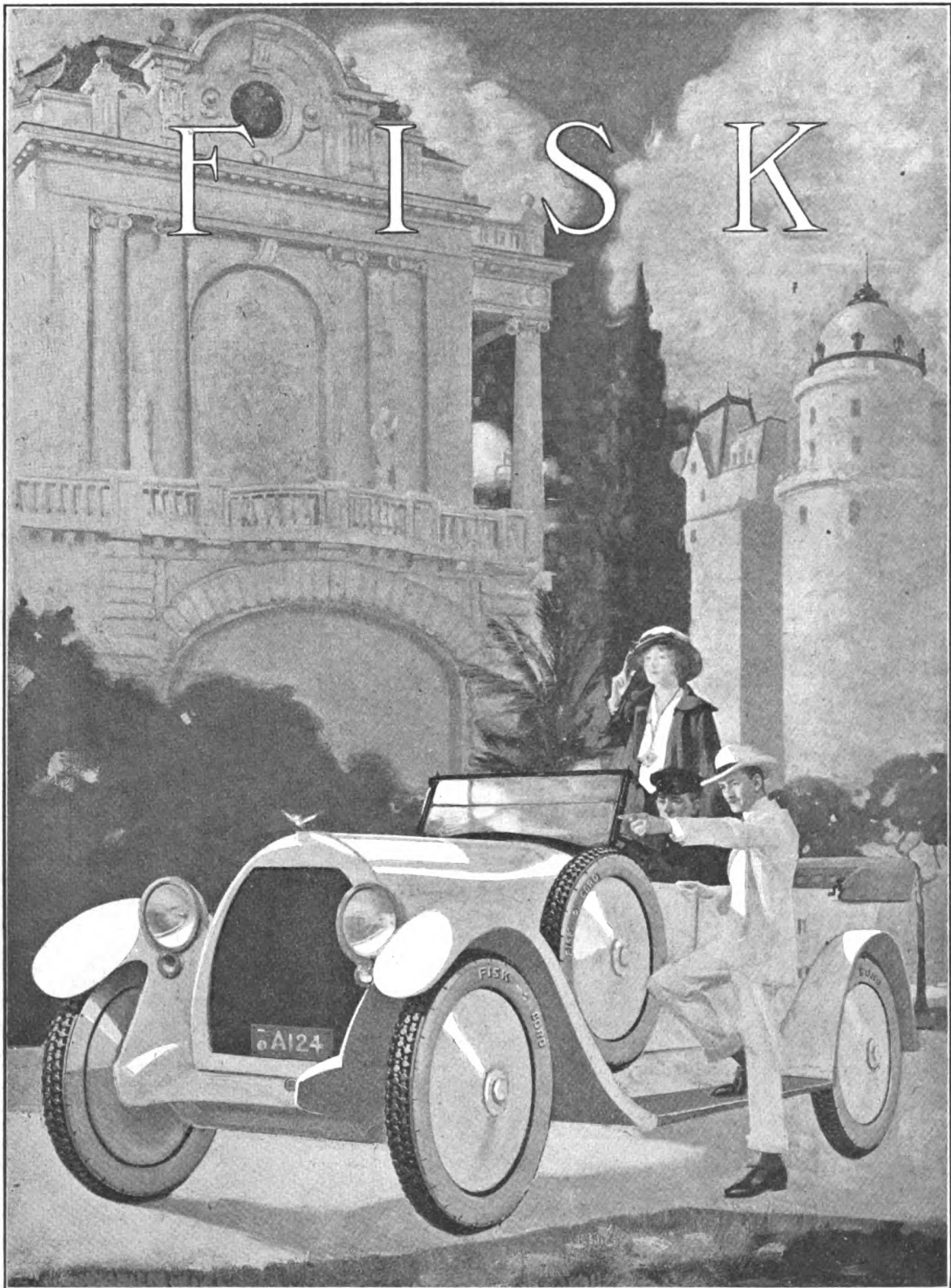


**TUNGSTEN**  
TRADE MARK REGISTERED  
**SPARK PLUG**  
Always on the job



**TUNGSTEN MFG. CO.**  
MARSHALLTOWN IOWA





© The Fisk Rubber Company, 1918

*From the painting by C. E. Chambers*

Owners of the highest grade cars in your city are the men who should patronize you regularly. That's the trade worth while. It is ever so much easier to reach this market when you sell FISK CORDS.

When writing advertisers please mention Motor World—it identifies you

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

The Class Journal Co.

U. S. C. Building, 281-241 West 39th Street, New York City  
 Horace M. Swetland, President  
 W. I. Ralph, Vice-President E. M. Corey, Treasurer  
 A. B. Swetland, General Manager

Business Department  
 Charles B. Shanks, Manager

Editorial Department  
 David Beecroft, Directing Editor  
 Ray W. Sherman, Editor  
 Stanley P. McMinn, Managing Editor  
 J. Howard Pile

## Branch Offices

Chicago—Mallory Bldg., 59 East Madison St., Phone Randolph 3900  
 Detroit—95 Fort Street, West, Phone Main 1851  
 Cleveland—Guardian Bldg., Phone Main 1142

Subscription, Per Annum (Postage Paid).....\$2.00  
 Foreign and Canadian Subscriptions.....4.00  
 Single Copies (Postage Paid).....10 Cents

## Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to Motor World.

Cable Address, "MOTORWORLD," New York

Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 245 West 39th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. O. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
 Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

Get Behind the Fourth Liberty Loan .....	7
How Many Bonds You Should Buy .....	9
What Broadway Is Doing on the Loan .....	11
Getting Off on the Right Foot .....	12
Building an Electric Service Business .....	13
Rural Motor Express .....	14
Keeping Above the Prospects Plane .....	16
Putting Truck Selling on a War Basis .....	17
Is There an Electrical Expert in Your Town..	19
Giving Movie Slides the Proper Atmosphere ..	20
Better Mechanics .....	21
The Law .....	23
Repairshop Short-Cuts .....	24
Editorial Observation .....	26
Letters From Readers .....	27
The Retail News .....	29
Automotive Equipment .....	31
Displaying the Farm Light System .....	33
Merchandising Possibilities of Cultivators ....	34
Regular News Department .....	36-45
Specifications .....	46-48

Advertisers' Index on Pages 136-137

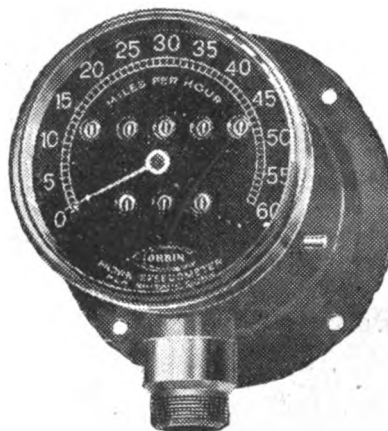
THE NEW YORK  
 PUBLIC LIBRARY  
 767117A

ASTOR, LENOX AND  
 TILDEN FOUNDATIONS  
 N 1935 L

## Reasons for

ORBIN-BROWN SPEEDOMETER

## Supremacy



### 1. Correct Design

All Corbin-Brown speedometers are built to operate on the centrifugal principle, which is simple and scientifically sure. Sharp changes in temperature, or electrical influence, cannot affect the Corbin-Brown. Its accuracy, on cars equipped with electric lighting and electric self-starter, does not suffer in the slightest degree.

Compound governors make the Corbin-Brown so sensitive that it registers perfectly as low as two miles an hour. The same governors absorb all shocks which would otherwise be transmitted to the instrument. Over the roughest roads the Corbin-Brown indicating hand does not wobble.

Simplicity is the keynote of Corbin-Brown design. The instrument itself has few parts and strong ones. There are no delicate features to get out of order easily, and wear is reduced to the minimum.

This proven correctness of design, backed by high-grade materials and careful manufacturing, affords the basis for the accuracy and durability which have made the Corbin-Brown famous.

*Write for catalog, describing the Maximum Speed Hand and other original Corbin-Brown features. You will be convinced that no other speedometer can so fully meet the requirements on your car.*

### Corbin Screw Corporation

American Hardware Corporation, Successor

New Britain, Conn.

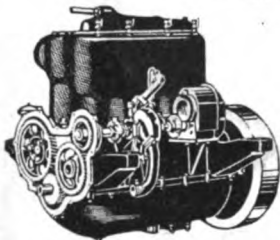
Branches: New York Chicago Philadelphia

# A Real Opportunity for Auto Distributors and Dealers

Passenger car curtailment is a serious reality, threatening to disrupt the organization developed by you at great cost in both time and money.

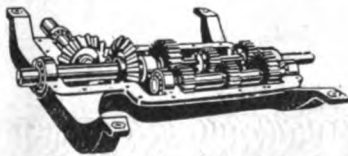
The more progressive Distributors and Dealers see in the tractor business the opportunity to maintain their organizations; perform a patriotic duty and make an attractive profit.

War conditions, with their attendant shortage of farm labor, horses and equipment, have lent a great impetus to the tractor industry. The demand has increased in leaps and bounds. Your organization, trained in automotive lines, is in a position to cash in on this demand immediately with



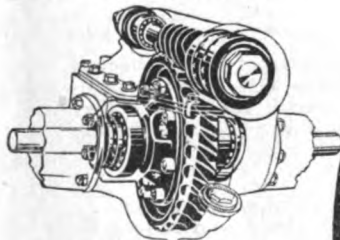
THE SANDUSKY MOTOR

Our own  $4\frac{1}{2}$  x  $5\frac{1}{4}$  four cylinder, four cycle type; drop forged high carbon O. H. steel crankshaft, camshaft and connecting rods; 93% tin die cast bearings; positive force feed and splash oiling; high tension Dixie Magneto; enclosed flyball governor; adjustable cone clutch; Bennett Air Cleaner; centrifugal water circulating pump; GUARANTEED KEROSENE BURNER.



THE SANDUSKY TRANSMISSION

Our own selective type; 2 and 3 miles per hour forward—DIRECT ON LOW; reverse, 2 miles per hour, gears and shafting high carbon O. H. steel, heat treated, hardened and ground; gears  $1\frac{1}{4}$  in. face; main shaft  $1\frac{1}{2}$  in. and counter shaft  $1\frac{1}{2}$  in. diameter; Hyatt and New Departure bearings throughout; self-contained lubrication and positively dust proof.



TIMKEN WORM-AND-GEAR DRIVE

The ORIGINAL worm and gear drive tractor. Most efficient and economical method of power transmission. Practically "trouble-proof." Driving worm specially analyzed nickel chrome steel, mounted on SKF Swedish Ball Bearings; worm wheel; special phosphor bronze; four pinion differential mounted within; driving shaft mounted on Hyatt and SKF bearings; self-contained lubrication and positively dust proof.

Wheel base 76 inches; weight, 4080 pounds.

L-7-J

## A Tested and Proved Tractor

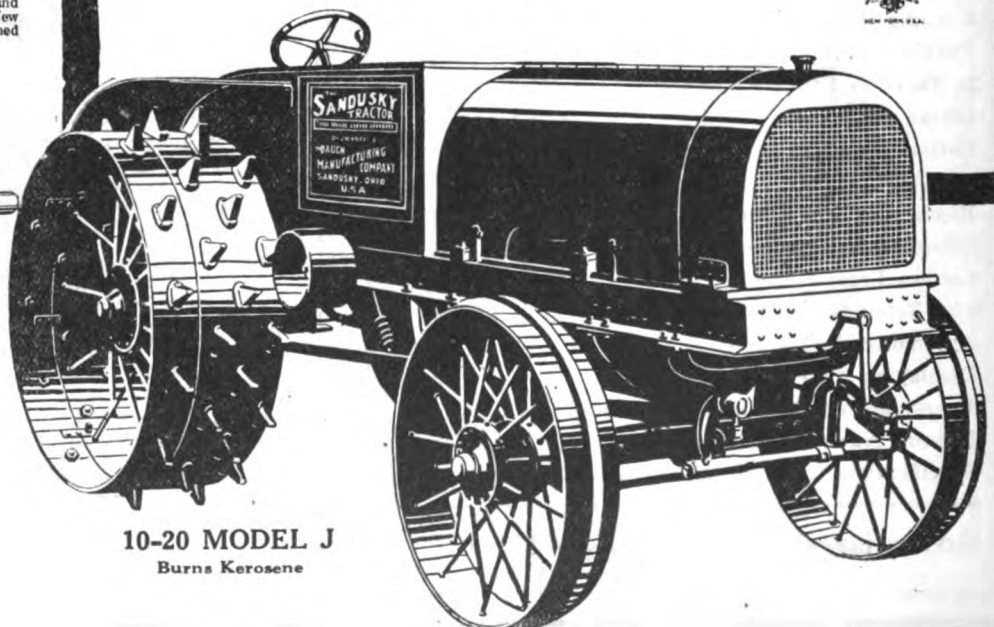
Right there's the point. Your success or failure as a Tractor Merchant depends almost entirely on the machine and the organization back of it.

In The Sandusky we are offering you a highly perfected tractor with many years of actual field development embodied therein; a real pioneer in the industry backed by a tremendous investment in its modern factory and up-to-the-minute organization. This machine has been actively marketed for the past six years through the big branch house organization which we are now turning over to Distributors. Thousands of them, both the 10-20 Model J and the 15-35 Model E, are today rendering valuable and satisfactory service to farmers, contractors, lumbermen, etc., in practically every State in the Union, as well as many foreign countries.

The Sandusky has been recognized everywhere as "America's Foremost Quality Tractor." It has for years been the greatest advertised tractor on the market in the best agricultural media. Our big plant, working day and night, can make immediate deliveries on a profit paying basis to you.

Wire for territory reservations. Confirm by mail. Prompt action will enable you to get started at once.

**The Dauch Manufacturing Company**  
Sandusky, Ohio, U. S. A.



10-20 MODEL J  
Burns Kerosene

When writing advertisers please mention Motor World—it identifies you





## Made the Wrong Guess

Ferdinand of Bulgaria made a wrong guess. He climbed on the band wagon where Kaiser Bill held the reins because he figured it was better than an even bet that the Hohenzollerns would ride thru to a successful finish.

Ferdinand opined that his friend William would win in a walk—a walk thru Belgium and on to Paris and the channel ports.

Ferdinand has his hands up right now. It is quite likely that when the Sultan of Turkey follows Ferdinand's example, and when Charles of Austria runs up the Kamerad signal, then Kaiser William will send out the S. O. S., and then—and then—the war needs for ships, for steel and for men will be less urgent.

Of course peace is not going to be realized tomorrow, or the next day—but it is somewhere on the way. Which means that all of us must work at our jobs harder than ever—not only to put on the last pound of pressure for a successful winning of the war, but that we shall be better able to take advantage of peace when it comes.

If you are a dealer, a jobber or a garage owner get your house in order.

If you are a manufacturer and desire to keep in favorable contact with these thousands of dealers, jobbers and garage owners—well, we modestly suggest that Motor World will prove an effective point of contact, and at small relative cost.

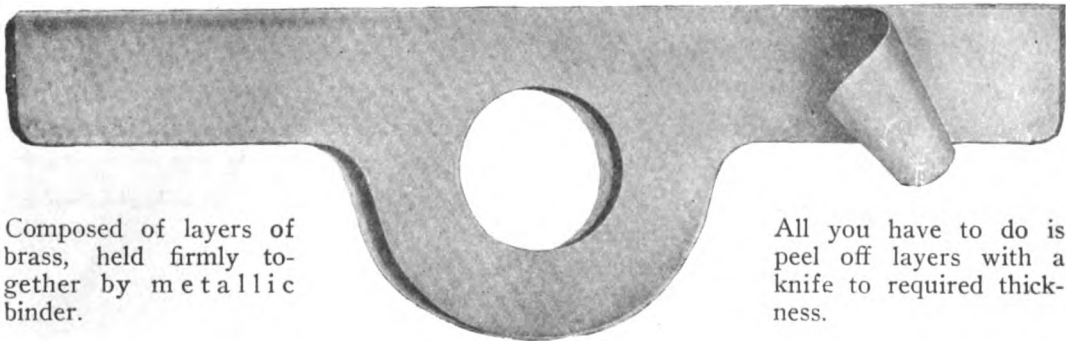
In the meantime bonds of the Fourth Liberty Loan are a real investment. Go the limit.



# Like lifting paper from a pad—

## Shims Made Quickly and Easily

LAMINATED shims do away with laborious filing of solid, or assembling of loose-leaf shims: no time or labor lost. No wasted effort. And in *these* days, minutes mean dollars. Surface is absolutely smooth and adjustments accurate. Send for free samples.



Composed of layers of brass, held firmly together by metallic binder.

All you have to do is peel off layers with a knife to required thickness.

**LAMINATED SHIM COMPANY, 533 Canal St. New York**

DETROIT: Dime Bank Bldg. ST. LOUIS: Mazura Mfg. Co.  
ENGLAND: R. A. Rothernel, 6 Great Marlboro St., London, W.  
STOCK SHIMS for Ford, Chevrolet Four-ninety, Continental  
7-W, Continental 7-N, Maxwell, Overland, Dodge.

# LAMINUM

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

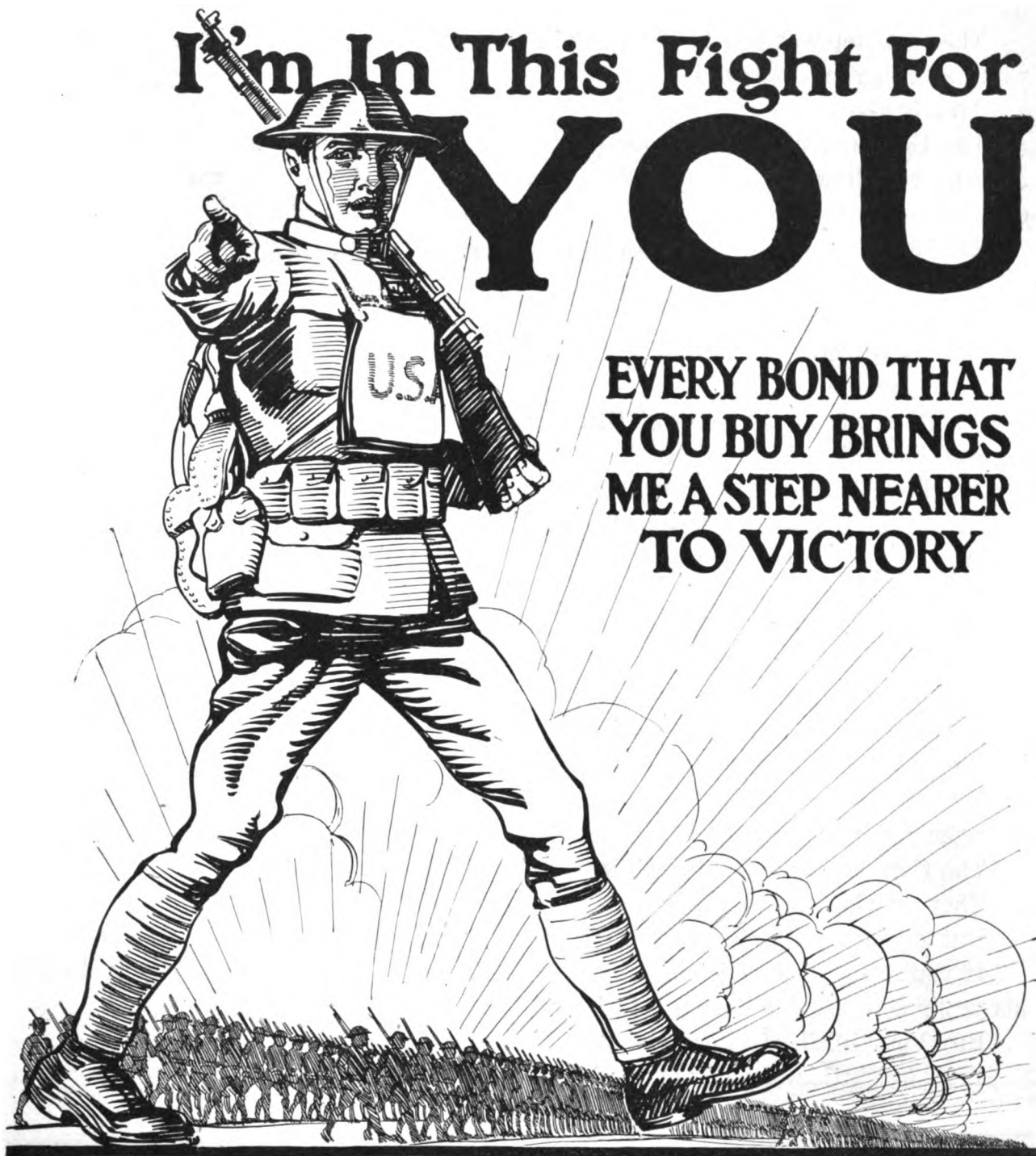
Vol. LVI

New York, U. S. A., Wednesday, October 2, 1918

No. 14

I'm In This Fight For  
**YOU**

EVERY BOND THAT  
YOU BUY BRINGS  
ME A STEP NEARER  
TO VICTORY





# NOW—ALL TOGETHER

**U**NTIL America went into the war the whole civilized world wasn't in. And until America went in the Germans had been having not such a bad time. But when the weight of our country was thrown into the scales things began to happen.

One of the biggest steps toward victory was a unified command. Foch was made the master mind.

The next step was to give him some things to work with—bigger armies, better war machinery and more of it.

And then—

The Germans started in the opposite direction, beginning with the day the Americans, whose fares YOU helped pay to France, showed the world that the dollar-chasing Yankees can do any kind of work once they concentrate on it.

The Germans were attacked and beaten back all along the line.

Bulgaria got hers.

She quit.

Turkey will get hers.

Then Austria will get hers.

And then Germany will get HERS.

And the Kaiser will GET HIS.

The big job is on. It is only partly done.

The home people who have to finance the thing have done a very beautiful job so far.

Shall we let it be said that we started something and didn't finish it?

Shall we let it be said that we put two or three million men in France and then didn't back them up and let them fight for us?

Right now, when the whole job is just ready to go whooping over the top, shall we by one penny weaken our cause?

We must not let up the pressure.

We must pour men and money into the game and keep making the pressure stronger and stronger.

The Germans can't last much longer.

They may last a year, and there are people who believe the war will be—

But let's not speculate. Let's FIGHT.

If you're in favor of letting General March have a chance at making good on his promise to lick the Germans inside of another year—

Buy Fourth Liberty Loan Bonds.

Let's finish this darned war and get back to business.

# How Many Liberty Bonds Should You Buy?

GOVERNMENT WAR EXPENSES						WAR CHARITIES	
Column I Family Income Group	II Average Percentage Contributable by Each Family in Group	III Average Amount Contributable by Each Family in Group	IV Number of Families in Group	V Total Income of Families in Group	VI Total Contributable by Each Family Group	VII Average Amount Contributable by Each Family in Group	VIII Total Contributable by Each Family Group
*\$1,000 — \$2,000	11.00	\$209	21,375,000	\$40,615,063,500	\$4,467,657,000	\$7.00	\$143,460,000
* 2,001 — 3,000	18.50	518	1,375,000	3,850,000,000	712,250,000	16.50	22,860,000
* 3,001 — 4,000	24.50	931	246,950	938,454,000	229,921,000	30.00	7,380,000
* 4,001 — 5,000	28.00	1,316	144,060	677,035,000	189,570,000	42.00	6,090,000
* 5,001 — 6,000	31.50	1,795	75,440	430,008,000	135,452,000	58.00	4,350,000
* 6,001 — 7,000	33.60	2,184	51,780	336,570,000	113,087,000	70.00	3,630,000
* 7,001 — 8,000	36.00	2,700	37,021	277,657,500	99,956,000	87.00	3,210,000
* 8,001 — 9,000	38.00	3,230	26,945	229,032,500	87,032,000	100.00	2,790,000
* 9,001 — 10,000	40.00	3,800	20,340	193,230,000	77,292,000	125.00	2,490,000
* 10,001 — 15,000	43.60	5,450	57,080	713,500,000	311,086,000	175.00	10,020,000
* 15,001 — 20,000	47.75	8,356	27,699	454,732,500	231,460,000	255.00	7,410,000
* 20,001 — 25,000	50.50	11,363	15,540	349,650,000	176,573,000	385.00	5,670,000
* 25,001 — 30,000	52.75	14,506	9,585	263,587,000	139,042,000	465.00	4,470,000
* 30,001 — 40,000	55.50	19,425	11,880	415,800,000	230,769,000	625.00	7,410,000
* 40,001 — 50,000	58.00	26,100	6,565	295,425,000	171,347,000	830.00	5,490,000
* 50,001 — 60,000	59.75	32,862	4,200	231,000,000	138,023,000	1,000.00	4,440,000
* 60,001 — 70,000	61.25	39,812	2,930	190,450,000	116,650,000	1,275.00	3,750,000
* 70,001 — 80,000	62.50	46,875	2,080	152,250,000	95,156,000	1,500.00	3,080,000
* 80,001 — 90,000	63.50	53,975	1,600	136,000,000	86,360,000	1,720.00	2,760,000
* 90,001 — 100,000	64.50	61,275	1,200	114,000,000	73,530,000	1,970.00	2,370,000
* 100,001 — 150,000	66.50	81,795	3,190	392,370,000	260,926,000	2,600.00	8,370,000
* 150,001 — 200,000	69.25	120,495	1,400	243,600,000	168,693,000	3,850.00	5,400,000
* 200,001 — 250,000	70.80	159,300	780	175,500,000	124,254,000	5,100.00	3,990,000
* 250,001 — 300,000	72.20	199,994	460	124,650,000	89,997,000	6,400.00	2,880,000
* 300,001 — 400,000	73.60	253,920	490	169,050,000	124,421,000	8,100.00	3,990,000
* 400,001 — 500,000	75.30	327,344	250	112,000,000	84,336,000	10,800.00	2,700,000
* 500,001 — 1,000,000	77.80	531,374	390	266,370,000	207,236,000	17,000.00	6,690,000
* 1,000,001 — 1,500,000	80.40	889,224	100	110,600,000	88,922,000	28,500.00	2,850,000
* 1,500,001 — 2,000,000	82.50	1,403,325	45	76,545,000	63,149,000	45,000.00	2,040,000
* 2,000,001 — 3,000,000	84.20	2,070,478	35	86,005,000	72,416,000	66,000.00	2,310,000
* 3,000,001 — 4,000,000	85.75	2,966,092	15	51,885,000	44,491,000	96,000.00	1,440,000
* 4,000,001 — 5,000,000	86.75	3,915,895	10	45,140,000	39,159,000	126,000.00	1,260,000
* 5,000,001 — and over	90.00	9,255,000	10	102,840,000	92,556,000	297,000.00	2,970,000
FAMILY GROUPS—their estimated total income and required contribution			23,500,000	\$52,850,000,000	\$9,342,769,000	Estimated Requirement	\$300,000,000
CORPORATIONS and other business enterprises—their estimated net income after dividend distributions of, say three billion dollars, and required contribution				7,150,000,000	6,000,000,000†		
Estimated Total National Income and amount realizable therefrom				\$60,000,000,000	\$15,342,769,000		
BANKS—the share of the burden of the fiscal year's financing which they probably must carry, either by direct purchase of Liberty Bonds and/or Certificates of Indebtedness, or by loans thereon					5,157,231,000		
Estimated receipts from direct taxation and bond sales					\$20,500,000,000		
Estimated receipts from indirect taxes, such as customs, excise taxes, stamp taxes, including sundry receipts					3,500,000,000		
COST OF THE WAR FOR THE FISCAL YEAR—estimated					\$24,000,000,000		

## How to Use the Tables

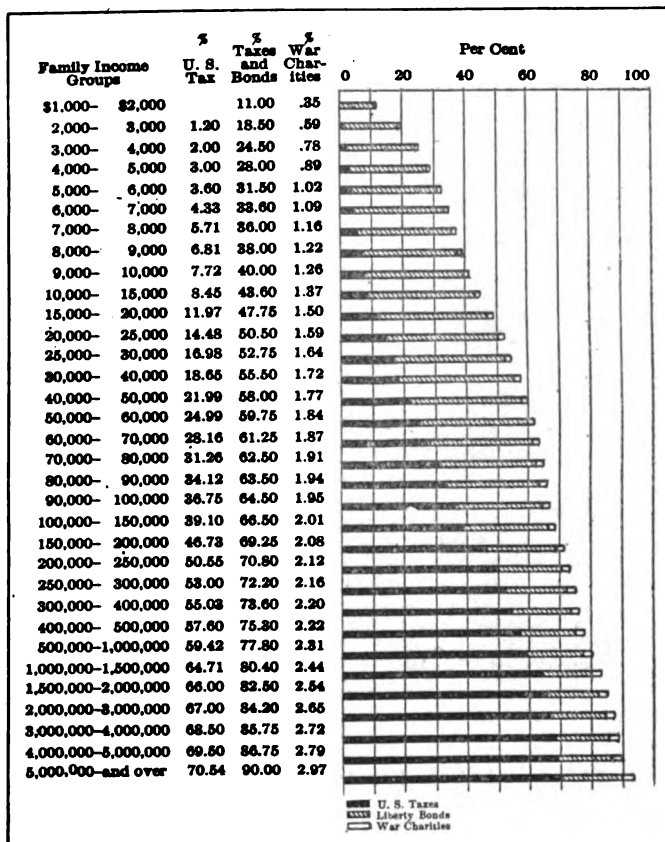
THE tables on this page are from a booklet regarding the Fourth Liberty Loan sent out by the Bankers Trust Co., New York.

Note the instructions in the lower right corner of the large upper table as to how to figure how much you should buy.

You multiply the yearly income of the people in your family by the percentage shown in Column II and find that you should buy \$—of Bonds in the course of the present—and let us hope last—year of the war.

From this deduct what you pay in war taxes and give to war charities. The balance is what you should buy.

The booklet states that some may be able to buy more and some less, but that if every one buys on this basis as nearly as he can we shall receive from bonds, taxes and other revenues the \$24,000,000,000 which is needed for the war this year.



# Keep 'Er Going!



*This is what we like to see. We've got our money's worth so far, and the boys over there will give us some more of the same thing if we only give them some more financial backing. Tanks cost money —and save lives*

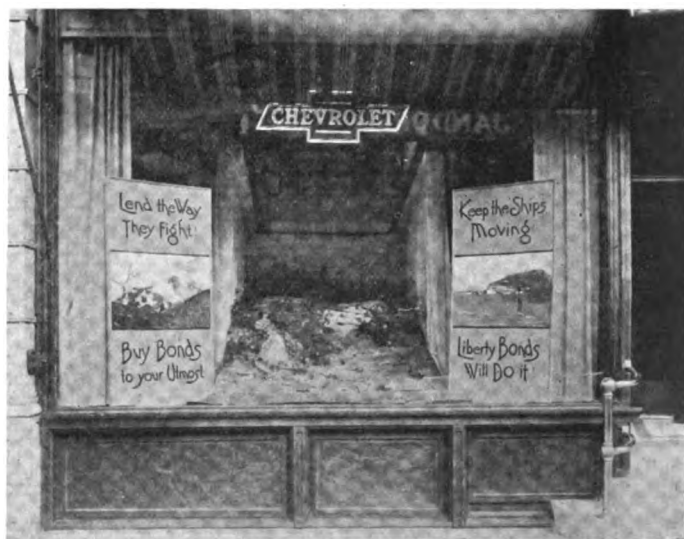
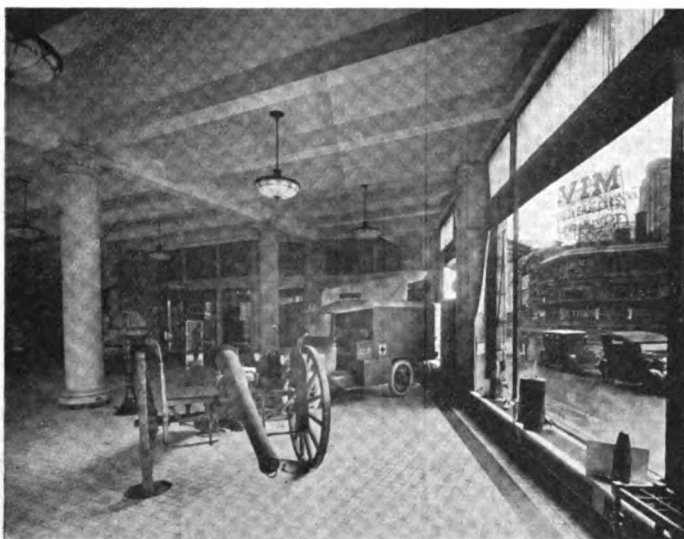


# What Broadway Is Doing for the Liberty Loan



Whole Salesrooms  
Have Been Turned  
Over to the Promotion  
of America's Great  
Financial Enterprise

*Above—The Overland salesroom at Broadway and Fiftieth Street has been turned into an exhibit of a field hospital. Everything is there except the patients. The display attracts great attention, especially as it is directly across the street from the Winter Garden and is in the White Light district. Right—In Brooklyn the Chevrolet salesroom has been turned over to the Government as headquarters for the Fourth Liberty Loan. It looks as much unlike an automobile establishment as it is possible for a salesroom to look*



*The Chevrolet salesroom at Broadway and West Fifty-seventh Street shows all sorts of war scenes. There is a big field gun which is an attention-getter, and in one of the windows is the display shown at the right*

# Getting Off on the Right Foot

## IN THE TRACTOR BUSINESS

There are right things and wrong things to do, says an old tractor man, and the dealer who starts wrong hurts the whole tractor industry.

Teach care of the tractor.

*By Clyde Jennings*

**I**T is my sincere hope that every motor car dealer who goes into the tractor business this fall and winter makes good for himself and the tractor business," said W. S. Roberts, manager of the J. I. Case T. M. Co. branch in St. Louis, when asked to give some advice to motor car dealers in their new venture.

"The motor car dealers are my friends. I have been with them much and have helped them to put on automobile shows and have sold motor cars to them. Because of my high regard for them, I am willing to offer some advice, and whatever is said will be with this feeling and with no spirit of criticism, either of dealers or tractors. My greatest hope is that a minimum of mistakes will be made.

"The motor car dealer going into the tractor business should be as careful in selecting his tractor as a farmer is in buying one. He should survey his community and decide what type of tractor that community needs. Types vary. Our company, before the war, sold many very heavy tractors in Russia. The great prairies there are the ideal field for such tractors. A local dealer in these prairie communities would have gone broke with small tractors. That illustrates what I mean.

"The motor dealer in a section of flat, broad fields of easily broken soil does not require the same tractor that a man selling in a rolling country of small farms.

"There are many new tractors on the market this year. No one of these will meet all requirements. If one style of tractor could meet all purposes, the Case company and other old tractor building firms would not be building different types and sizes.

"So I would say to the motor dealer: Look well into the merchandise you select. After you do this, sell that tractor *only where it will do the work required*. Probably no one make of tractor is going to meet the requirements of all prospective tractor owners in any one deal-

er's territory, so he should make up his mind at the start to sell only where he can do the work.

"One of the new tractors has been widely sold in this territory. It is a good

tractor for many purposes, but it has been sold for farms that it is not fitted for and is getting a black eye. That is too bad, because it to a certain extent *hurts the tractor business as a whole*.

## Tell Your Tractor Customers

### IF YOU STORE YOUR TRACTOR

**I**T is the Case idea that a tractor should be much used throughout the winter, or properly stored. Roberts gives the following rules as the Case idea of preparing a tractor for storage:

- 1—Clean the tractor thoroughly. All recesses and places containing dirt should be scrubbed with kerosene and brush.
- 2—Make absolutely sure that the cooling system has been drained and that not a drop of water remains in the pump or other places where it may freeze or form rust and cause damage. Also drain out fuel tank, carburetor and the entire fuel system.
- 3—Pour into each system a pint of heavy motor oil and turn motor several times to spread the oil inside of cylinders. This should be done several times when motor is cold to insure a coat of oil adhering to all surfaces. Give all parts within the crankcase and all finished parts around the motor a heavy coat of the same oil, being careful that cams, valve stems and all such parts are heavily coated.
- 4—Coat all exterior parts of finished surfaces, such as governor rod, and magneto driveshaft, with heavy oil.
- 5—Coat all exterior finished parts of magneto with motor oil and wrap up in paper. The first layer of paper should be soaked in oil, but should not contain so much oil that it drips. Care should be taken to wipe the magneto thoroughly before starting the tractor again, and never allow oil on the platinum points.

If a tractor is not housed during the winter extra precautions should be taken to protect it from rust by proper oil coating and wrapping heavily all polished parts—magneto, etc.—after oil has been applied. It is important to use waterproof material for outside wrapping, because if ordinary cloth should be used and become soaked it is much worse than none at all. A good canvas cover over the tractor after it has had the proper attention otherwise is a good protection.

Roberts would like every tractor dealer to get out some such directions as this for the good of tractor business in general.

"A dealer was in here the other day telling of his experience with another new tractor. He said that he had sold four and had to replace the motor of all of them. That was a surprise to me, for the motor in that tractor was a good one. Later tractor men have decided that the trouble with this tractor is that the motor sets low and is not sufficiently protected from the dust and that it heats under the steady, long run. Another new tractor puts the driver in too much heat and dust. Sometime the man who bought it is going to learn that he is suffering unnecessary discomfort.

"These are not in the way of knocks and most of these defects will be repaired before the tractors for next season's work are put on the market, and I am merely warning motor car dealers that there are pitfalls.

"Another thing I hope the motor dealer will do is to *stand fast for short-term sales*. The tractor business has been on near-cash basis. The tractor business is going at a high speed for some time to

come, and there is no reason, in the face of the demand we have every reason to expect, to let down the line on terms. The motor dealers should insist on large payments and they should undertake to handle only such business as they can carry well.

"But there is a splendid and useful field for the motor car men in the tractor field—one that they can meet better than any other and one that they can start on this fall and help to advertise themselves and boost the tractor business in general. That is urging the care of tractors in winter. The proposition is the same as that of the passenger car or the truck. The points of danger are the same.

"Many farmers have been educated to believe that weather does not harm certain implements very much. That is true of the all-steel separator and the portable steam engine. But it is not true of the tractor. It requires care—and much of it.

"The motor car dealer knows of the

importance of keeping water out of the carburetor in cold weather, of what water will do to the ignition. This is an old story to him.

"The proposition on the tractor is the same. He should urge the same care. I have heard of people who cared for their motor cars chiefly because of the upholstery. Of course, there is no cloth or fine leather in the tractor, but it is a combination wood and steel machine and that means that water will rot and rust it. Besides there is the engine.

"I hope that every motor dealer will start a campaign on care of tractors during cold weather when he takes up this line.

"We are urging as much use of tractors in winter as possible, or the complete storing of them. We give directions for the storing which might serve as a guide to dealers in their advertising.

"*If the dealers will tell the farmers to keep their tractors and motor cars in the same building and treat them the same, they will do a good work.*"

## Building an Electric Service Business in a Small Town

*Jesse O. Spray Did It in Salina, Kan., and Tells How He Arrived at Success*

EQUIPPED with a wife, a special aptitude for the electrical business and a \$10-a-week job with the Exide people at Kansas City, Jesse O. Spray began to struggle for a living some few years ago. His best asset was the wife; the next best, the special aptitude, for he soon began to climb the ladder under the inspiration of the one and with the assistance of the other.

One day he woke up to a realization of the fact that he had reached an \$1,800-a-year salary, but that he had no more to show for it than he had when he was getting but \$10 a week. He talked the matter over with Asset Wife and decided to strike out for himself. Wife encouraged the idea.

He selected Salina, Kan., for the venture, resigned his position, bought a bill of Exide batteries amounting to \$200—for which he did not have the price—and took the train for Salina.

He beat the batteries there long enough to telephone a doctor brother in a nearby town, who rose to the occasion by wiring the necessary \$200 to get the shipment out of hock. Spray rented a little room, 10 by 20 feet, behind a local garage, and announced himself to the community as the only exclusive electrical "fixer" in the vicinity. This was 16 months ago.

To-day Jesse O. Spray & Co., "exclusively electrical service," occupies an attractively fitted storeroom, 50 by 100

feet, with a service station in the rear, which carries sufficient equipment to take care of the business, and the business constantly is increasing.

There was an intermediate stage when the business for a short time moved into a room about half the size of the one occupied now.

"This shows some growth," says Spray. "I have made it a rule since I struck out for myself to sell nothing in the equipment way but the best, such goods as will not absorb all the original profit in service.

"Then such repair work as I am called upon to do is done promptly and efficiently. I have, since I have been here, demonstrated that I have the ability to repair any sort of automobile electrical equipment and that the work I do is quality work. I have built up my business strictly on prompt and satisfactory service.

"It was not easy to put across an exclusively electrical station in a town as small as Salina. I had to overcome the natural prejudice of the garagemen to admit that they were unable to fix electrical apparatus, and it was some time before they would willingly bring their repair work to me. Now, however, most of it comes automatically and I sell the garagemen nearly all their electrical supplies. Also I am gaining a standing with motor car owners who now are coming directly to me when any-

thing goes wrong with the electrical equipment on their cars.

"My shop equipment is not elaborate, consisting principally of test benches, but what I have is of the best, and, besides, I myself give personal attention to the work. Naturally, after my experience with the Exide company, I pay particular attention to batteries.

"I also have the agency here for a house electric lighting plant, but I would much rather repair than sell new plants, and lighting plants come to me from all over this section of the country to be fixed.

"I take it that whatever measure of success has come to me has come because I have given quality service always, sold quality goods and have given personal attention to my business. I am more than satisfied that I struck out for myself because I now have an established business and one that is growing larger every day."

Spray has an attractive office, neat and clean, well equipped with showcases for the display of electrical parts and made cozy with palms and other accessories. In his front window, which extends practically the entire width of his salesroom, he has conspicuously displayed a complete house lighting plant ready for instant demonstration. Spray is planning to give this branch of his business more attention, as he sees a great future for the farm lighting plant.



# Rural Motor Express

## WORK FOR THE PRESENT BUILD FOR THE FUTURE

*Dealers Should Be Investigating, Planning and ACTING Regarding the Linking of the City and the Country Through Rural Motor Express Lines—It Means a Greater Use and Development of America's Resources and the Foundation of After-War Business for Motor Truck Dealers.*

TO handle the promotion of the Rural Motor Express idea the National Motor Truck Committee at 7 East Forty-second Street, New York, is co-operating with official agencies. It has booklets telling what the Rural Motor Express is, how to organize one, how to determine the rates to be charged and how to put the proposition over in your section. Write to Samuel A. Miles or F. W. Senn of this committee for this information.

Many dealers are starting action on these lines. Some have already started express lines in their localities. What is doing nationally is indicated by the following excerpts from letters to this committee from dealers everywhere:

The following was received from M. A. Gibbin, 316 Caswell Bldg., Milwaukee, Wisconsin: "Am about to organize a Motor Freight Company to operate a series of lines averaging about sixty miles out of this city.

"I am informed that you and your committee are or have prepared considerable data and instructions that would be valuable to beginners in this line.

"I will appreciate any information you may be able to give me as to organization, service suggestions, rates or charges, costs of operation, best methods used to obtain return loads, etc.

"If some of these items are outside the work you are doing, where could I get this information complete and reliable?"

From Marion, Ohio

J. A. Williams, executive secretary of the Marion Chamber of Commerce, Marion, Ohio, writes: "We understand you have prepared pamphlets covering every phase of the organization of a Rural Motor Express Line, outlining plan of organization, services to be rendered, charges, sample cost sheet, preliminary survey of routes, canvass of prospective customers, operating suggestions, advertising and general suggestions.

"The writer is now endeavoring to interest merchants and farmers of Marion, Union, Champaign, Logan, Hardin, Wyandot, Seneca, Crawford, Richland Morrow and Delaware counties in an organ-

ization to operate trucks on regularly established schedules throughout the above named territory daily—centering at Marion, Ohio.

"The pamphlets you have prepared would prove of valuable assistance in these endeavors and, if consistent, I would like to ask that you forward copies to be used in crystallizing the thought of the community. If sufficient supplies are available, I would be pleased to see that two or three hundred influential merchants and farmers in this district receive them, sending them out with an appeal from this Chamber for co-operation."

From Ray Gill, secretary of the Business Men's Club of Fort Smith, Ark., comes the following report: "On account of the railroads' inability to furnish cars, and power, our wholesale houses are contemplating the organization of a Motor Truck Service from Fort Smith to the territory dependent on us.

"Our wholesale grocery houses are particularly interested in this matter at this time.

From Fort Smith, Ark.

"I would like very much to receive any literature or any information you may have of the organization or maintenance of Motor Trucks Service in which some several firms will be associated."

E. A. Bradbury, secretary of the Chamber of Commerce, Canon City, Col., writes: "The Western Freighting and Transportation Co. of Colorado Springs is arranging for service between Denver, Colorado Springs, Pueblo and Canon City.

"It is planned by this company to include Walter Higham, as well as other trucks in this community in this service."

A. J. March of the March Motor Truck Co., Milwaukee, writes: "It has been my intention to appoint an Advisory Board here in Milwaukee consisting of officers of the following organizations: Merchants & Mfrs., Board of Trade, County Council of Defense, State Council of Defense, State Highway Engineers, Secretary of Wisconsin Good Roads Assn., Wisconsin Bankers Assn., Wisconsin Advancement Assn.; then with a letterhead showing these names, take up the matter of appointing a committee of three

or possibly more men from towns, including a prominent banker, merchant and automobile or truck man.

"In order to get the thing started and have something to talk about, I am getting a big Wisconsin state map and as I have a pretty thorough knowledge of road and commercial conditions throughout the state, will block the same off in zones, submitting said zone areas to the committee in that zone, with instructions to suggest improvements to the same. In appointing these committees in the State, I will determine first the logical banker for it.

"We have, as you know, the calamity type and the type that is all right to-day and all wrong to-morrow and also the type that is inclined to be optimistic and can see a business proposition. The latter are the ones I will be after.

"I have tried to roughly sketch my working plan and as I know it is hardly a start, would appreciate very much any suggestions you can offer. The pamphlets are quite thorough but a history of how certain rural express lines or cartage propositions have been put over could be turned into a good selling argument. Facts and figures covering such cases would be of great assistance. Anything you can offer will be very acceptable. I agree with you that a Bureau of Motor Truck Efficiency is a necessary organization in conjunction with our proposition. Will enlighten you as to any appointments made and as to our progress just as fast as we can after we get going."

And from Green Bay, Wis.

B. F. Paige, of the Oneida Motor Truck Co., Green Bay, Wis., writes: "Noticing an article in Motor World of Aug. 7, 1918, in regard to the establishment of Rural Motor Express Lines, it suggested that dealers ask for the following:

"1—A cartoon poster.

"2—Rural Motor Express Lines.

"3—Organization of a Rural Motor Express Line; also to ask the National Motor Truck Committee for all the advice and counsel desired.

"We should be pleased if you would forward to us a reasonable supply of the above mentioned three items, as well as to supply us with all information rela-

tive to this movement that it is possible for you to give us.

"Our Minneapolis branch is, at present, working at two different points to establish Rural Express Lines and we feel the need of having all the information which it is possible to obtain in order that we may properly assist our branch manager."

W. H. Metcalf, secretary of the Motor Truck Association of Philadelphia, writes: "The president of our association, J. D. Howley, has appointed on the committee to co-operate with David Ludlum's Committee on the Rural Motor Express, as follows:

"Lee J. Eastman, president, Packard Motor Car Co., 19 N. Broad Street; E. J. Berlet, Stability Motors Co., 1720 Crosky Street, and H. B. Harper, Overland-Harper Co., 21st and Ludlow Streets.

"Mr. Eastman has signified his willingness to accept the chairmanship and believe both Mr. Berlet and Mr. Harper will serve on this committee."

E. E. Moser, director of sales of the Carolina Motor Co., Statesville, N. C., writes: "Please send us some literature on how to start and operate a rural express route.

"We are state distributors for Indiana trucks in North Carolina and have a great number of trucks doing hauling of this nature, but have to date perfected no system that is satisfactory to us. This information will be appreciated."

Caryl Spiller, secretary of the Adrian Chamber of Commerce, Adrian, Mich., writes: "We have your letter of Aug. 16 and also your two booklets, entitled, 'Organization of a Rural Motor Express Line and Rural Motor Express Lines.' Will you please be good enough to send an additional copy of these booklets, so we may bring them to the attention of another party in this locality?"

"Will you please advise if it is possible to furnish us with electrotypes of the illustrations you show in your booklet, so we may use them for publicity work here?"

"In the last paragraph of your letter you say you are enclosing a form of questionnaire, to be sent out to farmers, which we may have for distribution. May we have 5000 of these questionnaires?"

"After reading your literature, we have been wondering what concrete effort had been made to stabilize the marketing of the goods. Getting them to market and getting them marketed are altogether two different problems.

"Attached you will find a full explanation of the 'Community Market' which we have established in this community, and recommend a thorough study of this explanation."

The automobile editor of the Evening Index at San Bernardino, Cal., writes: "Your literature in regard to the establishment of Rural Motor Express Lines to hand and same will be used in early issues of the Automobile Section of the Index. Will you kindly keep us on the mailing list for future matter?"

"In this connection I wish to inform you that H. A. Jones, of the H. A. Jones Motor Truck Co., local agent for the Republic, Master and Panhard trucks, has

been boosting the matter for the past 6 months with some success. I feel that if you get in touch with him and supply him with some of the matter that he can be of material assistance to you in promoting the good work here. He is taking hold of the work because he desires to assist the government and not from a selfish motive and this community offers a splendid field, as the towns are closely located and the population sufficiently large to warrant it."

O. T. Barry of the Truck Service Co., Cedar Rapids, Iowa, writes: "Kindly forward the data covering the establishment of rural express routes and more particularly routes for delivery of short haul freights by motor trucks to the smaller towns around a distributing center. We have in mind taking up this matter with the various shippers in this city with a view to establishing such a system and



would appreciate full information as to rates and data which should be obtained from the shippers."

George Whitney, 1021 Guardian Life Building, St. Paul, writes: "There appears to be an opportunity in St. Paul and Minneapolis to organize rural express lines. I am told that you have information which one may receive pertaining to methods of starting such an enterprise, the cost of maintenance, etc. If I am correct, will you kindly send me such information as you have?"

#### Hagerstown, Ind., Wants to Start

H. S. Downerd, of Hagerstown, Ind., writes: "Attention to your work has come through the advertising of the Federal Truck Co. I am interested in your Organization of Rural Express Lines. Kindly send me copy. I may add there are some ten Rural Express Lines radiating from Richmond, Ind., all independent of each other. However, seven of us have a central station and a matron in charge and I dare say all would like a copy of your pamphlet or any information regarding our cause."

Miss H. M. Berry, acting secretary and treasurer of the North Carolina Good Roads Association, Chapel Hill, N. C., writes: "I wish to acknowledge receipt

of yours of Aug. 23, and in reply would say that I wrote you a few days ago that the package of material reached Wrightsville too late to be used at the Road Convention. I have had it forwarded to this office and am going to send it out to our members.

"I am enclosing herewith some resolutions passed by the Good Roads Association, which will show you the kind of work we are undertaking for the coming year. Our principal efforts will be centered on the creation of a State Road Construction Fund for building a system of State Highways connecting county seats and principal towns. This will make possible the establishment of motor truck routes, as the kind of highways to be built between these cities and towns will be determined by the kind of travel to go over the highways; so that you will see that our work will lead to the attainment of the objects of your committee."

E. E. Moser of the Carolina Motor Co., Statesville, N. C., writes: "We as state distributors for the Indiana truck have over a hundred trucks sold in the last year in all lines of business, and here in the vicinity of this office we have sold a number of trucks to saw-mill men that have been doing quite a lot of hauling for the farmers and the rural merchants and have derived a nice profit from it.

"The country that they haul in is not very thickly settled but they have a long haul and they haul fertilizer for the farmer and the supplies for the merchants, and we believe that we should work in some systematic way and soon be able to connect the small towns together, and that if successful it will spread all over the state. We have a ruling that allows shipment of freight only three days a week.

"We are in close touch with the North Carolina Good Roads Association and with the business men all over the State and will have their support should we figure out some basis that will show signs of being a success. Our dealers all over the State will co-operate with us too.

"We would like to know how your charges are based and any information will be appreciated."

Raymond Kenney of Akron, Ohio, writes: "I am starting a motor express line about twenty-five miles into the country and I pass through towns ranging from three hundred to five hundred inhabitants."

M. D. Hessmer of the International Harvester Co., Jackson, Mich., writes: "On Aug. 22 we wrote the National Automobile Chamber of Commerce, Washington, D. C., to send us one dozen bulletins on Rural Motor Express Lines and other information pertaining to same. If they have not sent our letter to you ere this, please forward these bulletins at your earliest convenience and oblige."

C. A. Morris of the Morris Motor Car Co., Waterloo, Iowa, writes: "In pursuance to suggestions from the Chevrolet Motor Co., please forward us pamphlet containing information as to the plan of operation, services to be rendered, charges, sample cost sheet, etc., for the purpose of organizing rural express truck route in Waterloo."

# Keeping Above the Prospect's Plane

If You Believe the Prospect Is on the Same Plane  
as You, You Are Handicapped from the Start

*By Ray W. Sherman*

"**T**HAT'S our fiftieth Sayanna truck sale," Tommy Trumbull announced, as he took from Eddie June a contract wherein the Callawassa Electrical Mfg. Co. agreed to buy one Sayanna 1-ton chassis. June, the fastest of the truck salesmen, smiled confidently.

"And there would have been a tractor contract to go with it if old man Mullen hadn't been such a hard-headed fool," blustered Billy Long, who was helping guide the Strongman tractor to supremacy in the Callawassa country where the organization of C. J. Reilly, Inc., as an organization, made a name for itself.

"A bit stubborn?" asked Reilly.

"Hard as one of the boulders in his back lot!" asserted Long. "If his head was any harder he'd have to wash his face with a sand blast. I had the darnedest scrap with him I ever had with a prospect."

## Then They Scrapped

"You scrapped with him?" asked Reilly.

"Well—," said June, "I wouldn't say I scrapped with him—but I did have quite an argument."

"In other words, you got right down on his same level and fought with him. Is that right?"

"I—I don't know."

"I'm afraid you haven't grasped one of the biggest principles of salesmanship, Billy, which is that you must always consider yourself as on a different mental plane than that of the prospect. If you don't you can't influence him any more than he influences you."

"What do you mean?" asked Billy.

"Just this: Unless you get your eyes up above a checkerboard you can't see what moves to make. Unless you consider yourself master of a team of horses you can't drive them. And unless you consider yourself the master mind in a sale you can't make the sale—unless by luck.

"Furthermore, if you are the master mind in a sale it means that you must be the **INFLUENCING** mind and **NOT** the influenced mind. In this case you have let your mind be influenced by the actions of old man Mullen, and the net result is that while you derived a lot of personal satisfaction out of telling him where he got off you failed to make the sale—and the only measuring stick in sales work is contracts. You came back without the contract. Not only that, but you probably have closed the doors against yourself so you can't go back and work on him any more."

"But what would you do if a farmer

told you his farm was different from any other farm in the country and that he wouldn't buy a tractor unless you brought it out and plowed five acres for him—and that maybe he wouldn't buy it then?"

"What did you do?" Reilly inquired.

"I told him we had tractors running

## Be a Good Sport

This hasn't anything to do with this Reilly story, but you ought to read it just the same. Reilly says:

"Supposing you were out with a bunch, doing the town, and you hit a show that looked good and it cost you a little something to sit through part of it.

"Supposing somebody said: 'Gee, that's a great show. Let's see the rest of it.'

"What would you say?"

"Like the good sport you are you'd say: 'Sure! We've got our money's worth so far! Let's see some more.'

"And you'd come through.

"You have paid the fares of a couple of million Yankee boys to France to put on a show for you and if you like the show thus far kick in with something to see the rest of it..

"It's a great show, boys. Come clean.

"Be a good sport!"

on farms just like this and that we could show him how well they were working—"

"And he said what?"

"He said he knew a darned sight better. He said there wasn't another farm in the county like his and that I didn't know what I was talking about."

"After which?"

"Oh, then I said I had some slight knowledge of what I was talking about and told him I could prove to him that we had tractors on farms like his and that—"

"You needn't tell any more. About that time you got sore at him because he wasn't convinced that what you said was true and you bawled him out, didn't you?"

"Well—maybe some folks would call it that," smiled Billy.

"You let him sell you the idea that he doesn't need a tractor, didn't you?"

"Well, he didn't buy one."

"Which ought to indicate that he's a better salesman than you are—but it doesn't necessarily. When you go into a sale, Billy, you must consider that you are on a plane above that of the prospect and that he is nothing but one of the parts of the machinery you must operate to make the sale come out your way.

"You must remember that you are simply trying to manipulate his mind so that he will do what you want him to do, and whenever he makes a move of any kind you must figure out what move you must make next to get him going in the direction you want him to go. You must never get down on the same plane with him, because, when you do that he has just as much power as you have and you are both equally pitted in the business of influencing minds. And the chances are you will come out the small end of the horn.

"When an inventor is trying to make pieces of wood and metal do what he wants them to do, does he get mad and fight with them? Certainly not! He realizes that they are only the wood and metal of the invention and that if he keeps at it long enough he can make them do what he wants them to do.

## Like Cat-and-Mouse

"You must picture yourself as always studying the prospect, and watching him the way a cat does a mouse. I think this cat-and-mouse illustration is as good as any, because the cat knows she is the master of the mouse and can win out in the long run by pursuing the right tactics. But if the cat lowers herself by pitting her powers of speed against those of the mouse she loses out because the mouse can duck away and beat her out.

"So with the prospect. You must play with him, watch him, manipulate him, and if he gets away from you come back at him some other way and just keep at it until you get him. If you put yourself on the same plane with him he is very likely to beat you."

"In the case of old man Mullen I would have admitted that he has a very peculiar farm and then I would have begun my sales maneuvering to get him, unknowingly, to investigate some other farms and see before he realized it that what you contend is true.

"If you admit the prospect is on your level in a sales move you are beat before you start. If you keep yourself above him—in your own mind—you have some chance of winning. The other way you have little or none."

# Putting the Business of Selling Trucks On a War Basis

*What Are You Doing to Effect War-time Economies?*

Perhaps there are some suggestions for you in what one Philadelphia branch manager has done and is planning to do in this regard that may prove helpful

*By K. H. Lansing*

**A**PPPLICATION of the idea behind the "Don't Waste Gasoline" campaign is being extended by some Philadelphia motor truck dealers and factory branch managers to all phases of their business. There is a growing tendency in the trade to ascertain more carefully how the various kinds of leaks may be stopped and to put business on a war basis.

Useful hints on how this can be accomplished are given by P. C. Chrysler, manager of the branch factory of the Hurlburt Motor Truck Co., covering the eastern Pennsylvania, Delaware, Maryland and southern New Jersey territory.

The methods Chrysler used to effect economies are valuable to dealer and distributor. Not only does Chrysler tell of successful efforts already made to cut down unnecessary expenditures and save waste, but he outlines plans to be put into effect within a short time, when his quarters will be in the large building at 1641-1643 North Broad Street, Philadelphia, instead of in the comparatively small one at 2132 Market Street.

By being systematic to the extent of having his salesforce go over their index cards relating to prospects at home, and preparing also notes for correspondence after business hours, the men are ready to begin the business of the day as soon as they arrive at the office.

Starting promptly means finishing the day's work promptly, and this means cutting down the electric lighting bills for the office.

A similar plan obtains for the repair-shop and service station of the company on Irving Street.

"We have not had an electric light turned on in this office since June 15," said Chrysler, "and in the service station not an electric light has been turned on for illuminating purposes since July 1.

Are we putting business on a war basis? Look here:

"A great source of saving, not only in time but in actual gasoline and manpower, is a plan I am insisting on here. It is

*"Wherever possible bring the customer to the truck, instead of the truck to the customer."*

"It has the added advantages of centralizing his attention, of keeping competitors away at the moment of making a sale and of the possibility of the manager closing a contract where the salesman, if new, might be talking past or away from the point.

bill would have been for the time in June, July, August and September that we have used none is immaterial to anyone looking for tips on how to save; but it can be a very substantial saving when the principle is followed out for months at a stretch in two or more buildings.

"In winter it will be necessary, of course, to use more light. I have not figured out in dollars and cents the economy effected in bringing the customer in to see the truck, but as we took trucks out about three times a week on an average, there is a considerable saving here, too. And there are many ways of cutting down non-essential expenses.

"I am looking forward to the day in October when I shall have all our interests here under one roof—that always means a saving in this business. If your service station is a couple of miles away from the office there is always a waste of power going and coming.

"The added chance of making more sales, either directly or indirectly, by having all models on view, is another argument for the one-roof plan. We shall have in our new quarters all models of Hurlburt machines, from the ton-and-a-half vehicle to the seven-ton truck.

"There's less overhead expense when there's more under one roof."

Another expense saver, Chrysler showed, was putting into effect a well-divided territorial scheme for the salesforce. Through such means the following advantages accrue:

- (a)—*There is a minimum of time and incidental expense, such as carfare, where salesmen go without an automobile.*
- (b)—*They know exactly where they are going and how to get there before they have been more than a few days on their "beat."*
- (c)—*They never cross in on one another's territory, causing disputes, loss of time and office "entente" and needless expense of carfares for two where fare for one only should have been spent. This may seem a small item, but it looms big by repetition.*

(Continued on page 45)

## HERE'S JUST A LOOK-IN

**H**E hasn't had an electric light on in his office since June 15, or one in his service station and repairshop since July 15.

He has the customer come to the salesrooms to see the trucks, instead of sending trucks out to customers, or prospects.

He's saving money by it, too.

Checking up foremen, co-operative buying of office supplies and other materials, "customer driveaways" and other plans constantly are bobbing up.

Now go on with the story.

"A customer is always better handled inside. There is no crowd to take his mind off the deal, as there sometimes is where a salesman takes a truck to the prospect's place of business. More suggestions are apt to come to the salesman who is in the office which interest the prospect and

*"After he has been sold he can see your stock of models if you have the space and facilities to show them, and this may mean a future sale."*

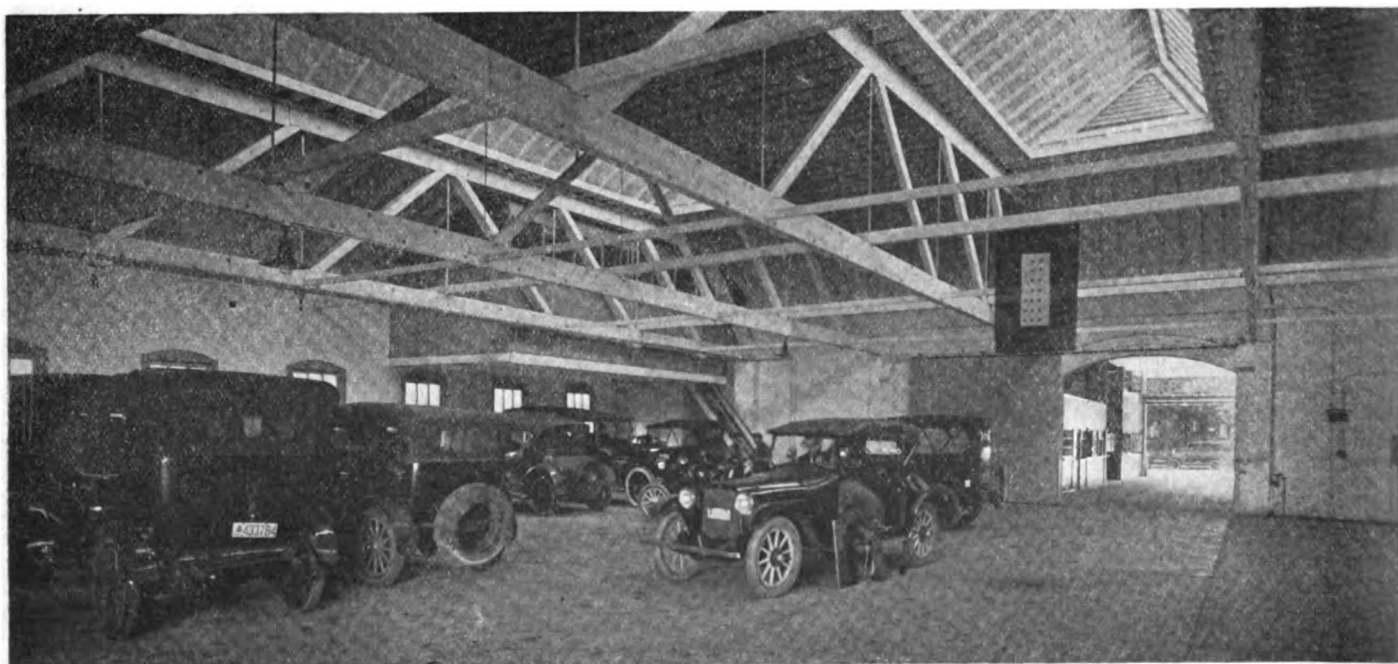
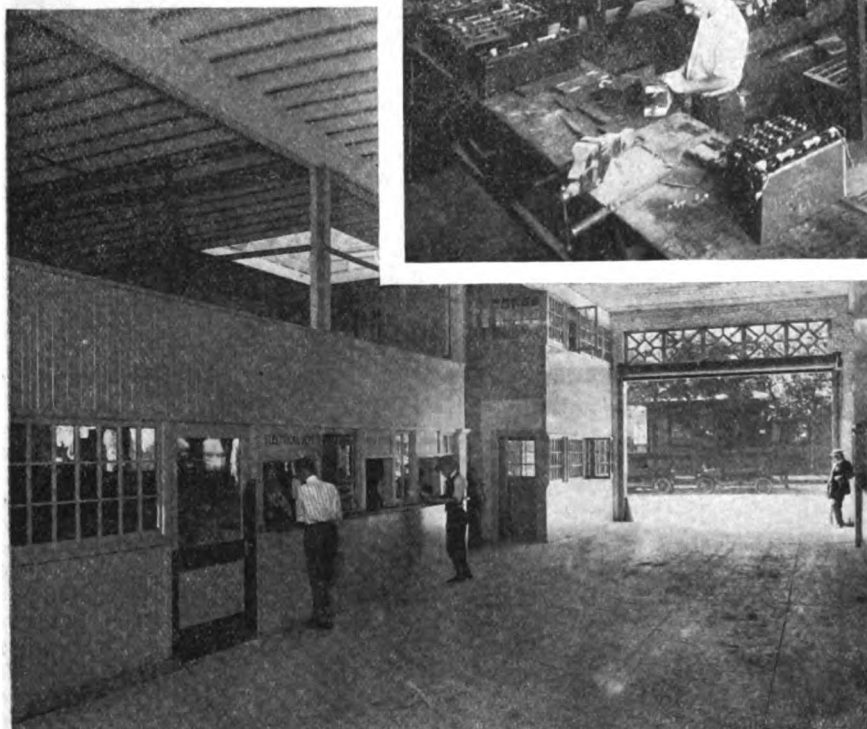
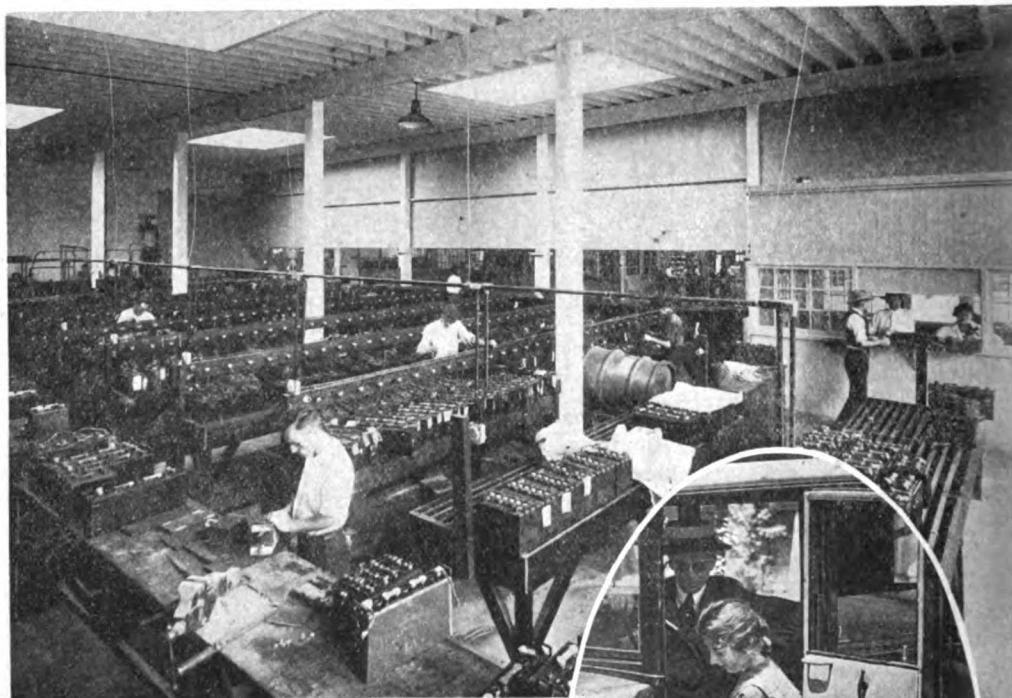
"There is economy and an element of looking ahead in this plan of bringing Mohammed to the mountain.

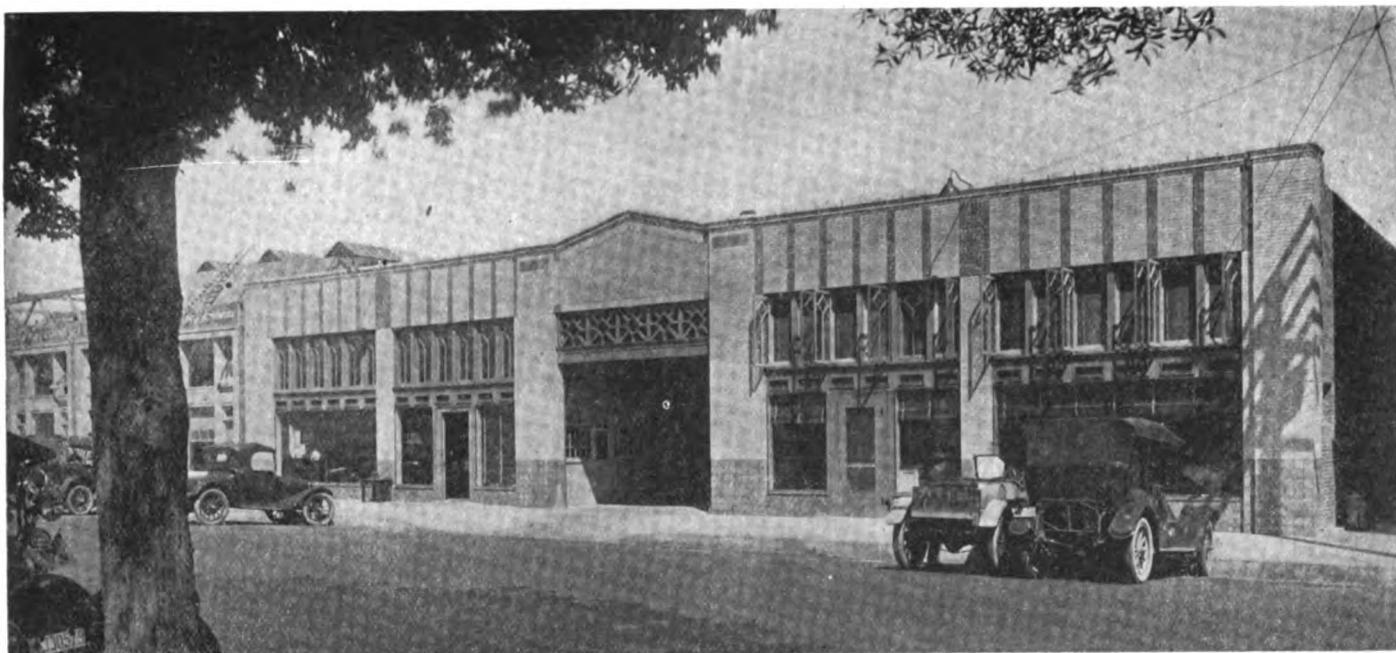
"Just how much my electric lighting



*Here's a Real  
Battery  
Service  
Station*

*Some glimpses of the  
shop of the Electric  
Equipment Co., Los  
Angeles*





*Eight years ago the Electric Equipment Co. was a hole in the wall. To-day it occupies this modern establishment, with agencies for a lot of the leading apparatus of the industry*

## Is There an Electrical Expert in Your Town?

If Not, There Is a Chance for You to Become Electrical Headquarters—A Los Angeles Man Has Done It, and Tells How

**"Drive down to the Electric Equipment Co.; they'll take care of you."**

**T**HERE is scarcely a motrlist in Los Angeles who has been operating a car for six months who has not been given this direction by some garage shop foreman. And the car owner knows where to go without asking further. But six years ago, if such instruction had been given, the response would have been: "Electric Equipment Co.? I never heard of them; where are they?"

The difference is represented in the fact that Ray Thomas now is principal owner and chief boss for the Electric Equipment Co. and six years ago he was merely one of the hands around the place. Thomas has developed and it has been a difficult thing for him to keep pace with the growth in business that he has built up simultaneously.

### Eight Years Ago and To-day

Eight years ago this concern was literally a hole-in-the-wall place on South Olive street. Magneto and coil repair work was about all that was done and it could not be said there was any rush of that. To-day it is the best known concern of automobile electricians on the Pacific

Coast and its new home is the distribution center and service station for Mea and Eisemann magnetoes, Bijur starters, Ward Leonard regulators, Northeast starters, Westinghouse starters, Klaxon horns, USL batteries, Atwater Kent ignition, Dyneto starters, Ecco magnet chargers, Ecco magnetmeters, and Leece-Neville starters. There are branch houses in San Francisco and Fresno and service stations in every city of consequence in the state. In San Francisco a new building has just been occupied that is the best of its kind in that city.

After Thomas's influence upon the affairs of the company began to be felt, about five years ago, larger quarters were sought, but even then two-thirds of the structure was sub-leased. Later an additional one-third was taken over, then all of it and later a balcony was built. In 1916, a new building, 86 x 90, was occupied. Three months later the battery department was moved back into a portion of the former home. This was followed by extending the battery department to all of the old building and reserving the new for starter and generator departments and stock rooms. In June of this year came removal to another new building built especially for the uses of the company. It is 100 x 155 and extends from street to alley, one story high, with balconies and mezzanine floor for the offices.

Fifty-five employees are connected with the Los Angeles place, 40 at San Fran-

cisco and 5 at Fresno. Because of national conditions, many of the most valuable employees have left the company in the last year and young women are now being taught to replace some of these. There are girls in the battery testing, stockroom, pricing and checking departments. And these girls in the stockrooms have to have their heads about them at all times. There are more than half a million parts of electrical systems, all cataloged and in stock. Making up that catalog was one of the biggest jobs it has been necessary to meet.

### Largest Battery Room on Pacific

The battery room is the largest on the Pacific Coast. There are accommodations for 2,000 batteries at one time. Some three-story tables are in use. The equipment includes bearing pullers, magneto testing racks, generator test stands, where generators can be run at every speed under all loads and every possible variation determined. The company manufactures a magnet meter that measures the strength of a permanent magnet instantly. The device was invented by one of the shop employees and now is marketed in all parts of the world. There also is a magnet charger invented by the same man that is used to charge permanent magnets. This is not patented.

The motto of Ray Thomas and his assistant, Ernest Ingold, in the conduct of affairs of the Electric Equipment Co., is, *(Continued on page 45)*

# Giving Your Movie Slides the Proper Atmosphere

BY ERNEST A. DENCH

Author of "Advertising by Motion Pictures"

*IN advertising tractors, trailers, automobiles and other automotive products on the screen in moving picture theaters, the automotive dealer must be a student of psychology. His advertisements must be both instructive and entertaining. He should play up the educational features of the article he is selling. For instance, he should illustrate how the tractor is—but read this story and learn for yourself.*

HOW many automobile dealers and repairers go beyond selecting the theater in which to show their slides? They may consider that their duty is done after they have decided upon the right medium. As a matter of fact, their work is only half finished. There is such a thing as giving your slides the proper atmosphere. The psychological element is present in the motion picture theater. While you can show your slides without considering the psychological element and still obtain satisfactory results, you are merely scratching the surface. By digging deeper—by studying the psychological element—you will be amply compensated by the increased efficiency of your slides.

## The Psychological Element

What, then, does this psychological element consist of? It is the effect of the different film subjects on the audience. Let us take the average motion picture program and dissect it. There is usually a feature drama, a comedy, a news weekly and an educational reel, the whole taking about two hours to show. The news reel is generally shown first, the educational next, followed by the feature picture, the comedy reel concluding the program. The operator reserves the intermission for the showing of advertising slides. This has served the advertiser's purpose up to the present.

The motion picture theater has undergone many changes before reaching its present high degree of perfection. Slide advertising is passing through the same process. At first the slides were crude, but bit by bit the manufacturers improved their output, with the result that the artistic slide to-day leaves little to be desired. Automobile dealers and repairers and other local advertisers

have resolved that the dirty and cracked slide shall not flourish. Practically the only reform of any consequence which remains to be effected is psychological slide presentation. There is psychology in high grade photoplays, there is psychology in their presentation. Why not, then, slide psychology? It is not as if it is something as costly or as rare as radium. Slide psychology is within the reach of most automobile dealers and repairers. Its chief expense is more gray matter, and, considering that the successful automobile dealer and repairer must be a student of human psychology, all he has to do is to extend his psychological activities.

The first subject which comes on the screen is the animated newspaper. After this the audience is in a receptive mood toward news. What news have you, the automobile dealer and repairer, to impart? You may have received a fresh shipment of a new line of automobiles, you may be clearing out certain articles, you may have a special timely inducement to make to those purchasing at your store. All these items are news and should be treated as such. It will not do to present a stereotyped announcement at this stage of the program. Give your slide a caption like those that you see in any live newspaper. Then follow with the piece of news in real newspaper fashion, as per the following example:

## NEEDED SUPPLIES REACH BLANKTOWN

Shipment for Brown's Store Sufficient to Take Care of Everybody

BLANKTOWN, May 10—On a freight car arriving to-day was a large shipment of automobile accessories. Brown's auto had to make several trips to take the consignment to his store. The goods will be on display to-morrow.

The operator can make you such a slide in a hurry by adopting one of the several home-made slide processes at his disposal. If there is time, it is advisable to place the job with the local photographer, who will be sure to produce an artistic colored slide which will reflect favorably on your store.

The educational reel may be anything from salmon fishing to silk manufacture. The subject is generally handled in such an entertaining way that the audience seldom realizes that it is imbibing information.

This is as the ideal educational reel should be, and this applies also to the slide that follows the educational reel. Play up the educational features of the automobile business, tell how the goods are manufactured. You can obtain such slides from the national advertisers whose products you handle.

The piece de resistance at the photoplay theater is the feature picture. Occupying never less than an hour, it tells a big story, is enacted by a star and is produced in a sumptuous fashion by a talented director. The slide which accompanies this kind of picture must be the best that money and brains can produce.

## The Serious Slide

Don't introduce a picture for the sake of making the slide attractive. Make your message justify the picture and vice versa. The drama which preceded your slide has left the audience in a serious frame of mind, has given them something to think about. Don't have it be said of your slide that it is shallow in appeal. The true test is the number of people who remember your slide after they have left the theater.

When all the slides are shown together during the intermission all you have to compete with are other advertising slides. At this time the audience cannot help thinking slides. It is the psy-

(Continued on page 32)

*A Department of***BETTER MECHANICS***No. 84****Standard Adjustments and Operations on the  
Nash Model 2017 1-Ton Rear Axle***

**T**HE rear axle of the Nash 1-ton truck is a Clark internal-gear drive (formerly known as the Celfor axle). It differs from the regular Clark axle in that it is equipped with the M & S differential. The following operations cover the taking down of the axle entirely with the exception of the disassembly of the differential itself and the disassembly of the third member just in front of the differential:

**Removing Rear Wheels**

- 1—Block the front wheels to prevent the rear axle falling off the jacks.
- 2—Jack up the rear axle till both rear wheels are just clear of the ground.
- 3—Support the frame in some way, either with a chain fall or with horses and blocking.
- 4—This blocking should be high enough so that when the jacks are taken out from under the axle, the wheels barely touch the floor.
- 5—Remove the spring catch on the hub with a screwdriver or other tool that will

**By J. HOWARD PILE**

go under the wire. Simply lift up the bent end till the end comes out of the hole and slip the whole ring off.

6—Unscrew the hub cap with the hub-cap wrench.

7—Remove the cotter pin from the wheel spindle.

8—Remove the wheel nut.

9—Pull the wheel off the spindle, sliding it on a greased plate. The inner bearing is easily taken off as the outside lining is a slip in the hub.

10—Remove the nuts from the twelve bolts which go through the spokes, brake drum and annular gear.

11—Drive these bolts out.

12—The brake drum will now slip off as it is held with the same bolts that hold the gear as mentioned in operation 10.

13—The other wheel is to be removed in exactly the same manner.

14—Remove the nuts and bolts from the flange that connects the propeller shaft with the pinion shaft on the rear axle.

15—Disconnect the brake pull-rods from the rocker arms on both sides.

16—Remove the cotter pins and nuts from the spring bolts.

17—Drive out the spring bolts from the shackles and hangers.

18—Take the axle out from beneath the truck using either castor jack or factory hand truck.

**Disassembling the Axle**

19—Remove the brake bands on both sides by taking out the brake-drum stop-screw nut. This is shown in Fig. 1.

20—Remove the pinions and axle drive-shafts.

21—Remove the dust shields on both sides by taking out the three bolts that hold each one to the brake flange.

22—Remove the bolts that hold the axle-shaft housings to the dead axle.

23—Remove the cap screws that hold

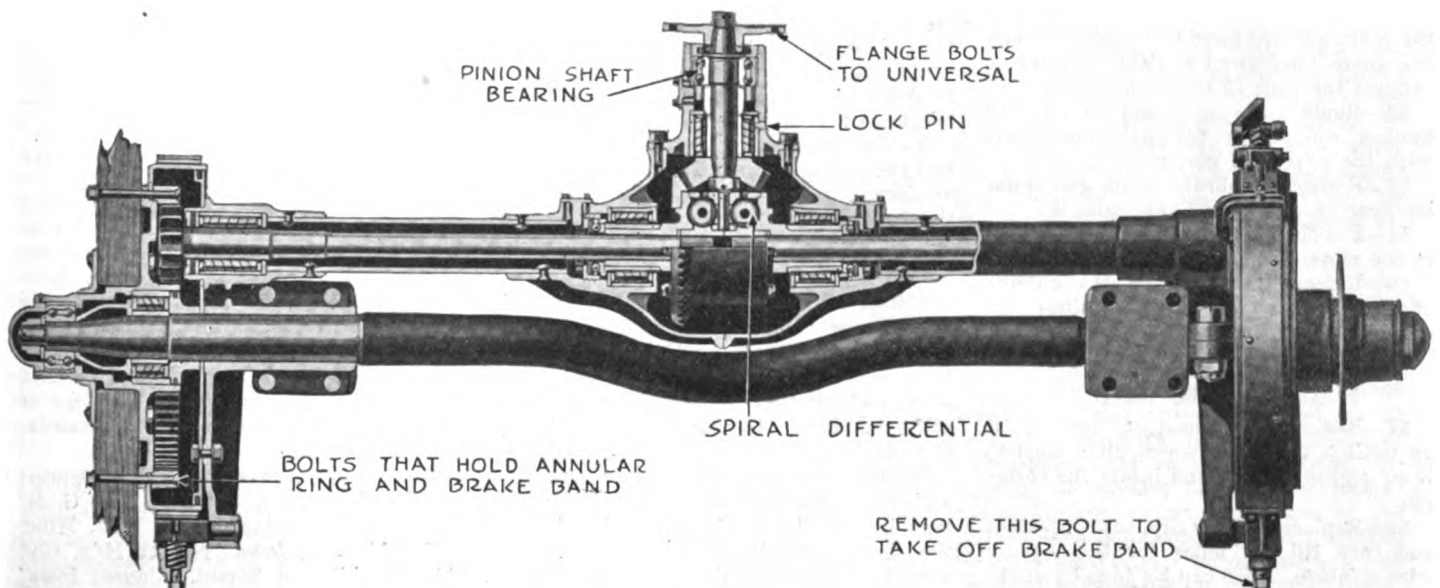


Fig. 1—The left half of the figure shows how the rear wheel, pinions and annular gear are arranged. At the right is seen one of the bolts that hold the axle-shaft casings to the dead axle



the pinion-shaft housing to the axle-shaft housing and lift that member entirely off.

24—Remove the two axle-shaft housings by taking out the bolts and nuts that hold the left and right sections together.

This leaves the axle in such shape that nearly all the parts can be easily gotten at, cleaned and inspected for wear or breakage. Should an entire disassembly be necessary, the differential may be taken out by removing the pins and the roller bearings can be pulled out. The pinion shaft and its bearings are taken out by releasing the hexagon nut and removing the parts.

#### Replacing the Parts

It is assumed of course that before assembling the parts, they will be cleaned, inspected and the wearing surfaces lubricated.

1—Put the axle-shaft housings together and replace the bolts and nuts.

2—Replace the pinion-shaft housing and put the cap screws in place and then tighten them up.

3—Bolt the axle-shaft housings back on the dead axle.

4—Replace the two dust shields and put on and tighten the three bolts on each side.

5—Replace the axle drive-shafts and pinions.

6—If the rear wheel brakes are to be relined, they should be attended to at this point. Drive out the old rivets, drill and countersink the holes and rivet the new lining in place.

7—Replace both brake bands, securing them with the stop-screw nuts.

8—Put the axle in place underneath the truck and shift it around a bit till the spring eyes are in place in the shackles and hangers.

9—Replace the spring bolts.

10—Put the nuts on, tighten them and replace the cotter pins.

#### Loosen the Pull Rods

11—Connect the brake pull-rods on both sides. If new lining has been put in the brakes, the locknuts at the yokes of the pull rods will have to be loosened and the yokes unscrewed a little in order to connect the rods to the rocker arms.

12—Replace the bolts and nuts in the flanges connecting the propeller shaft with the rear-axle pinion shaft.

13—Replace the brake drum and annular gear on one of the rear wheels.

14—Put the bolts in place with the lugs in the slots.

15—Replace the nuts on the outside of the spokes and tighten these up evenly.

16—Replace the wheel on the spindle.

#### Adjusting the Wheel

17—Replace the wheel nut and set it up until it binds the wheel, then slacken it off a quarter turn and insert the cotter pin.

18—Replace the hub cap, set it up tight and turn till the holes for the locking wire coincide. This can be done by sticking a piece of wire in the outside hole and feeling for the inside hole as the wrench is turned.

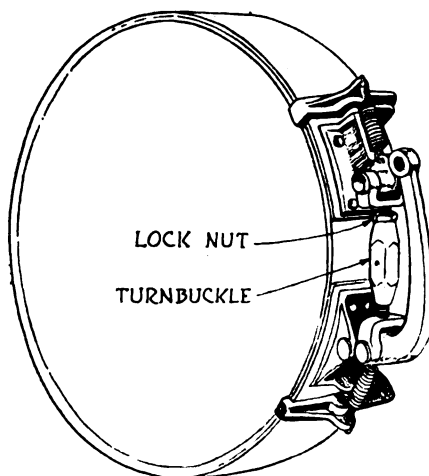


Fig. 2—The brake bands are adjusted with the turnbuckle to make both parts of the band operate equally

19—Replace the locking wire.

20—Replace the other wheel in the same way.

#### Adjusting the Rear-Wheel Brakes

1—With the two rear wheels clear of the ground, see that the brake bands do not hold the drums at all when the brake pedal is all the way up.

2—Test the adjustment of the brake-band adjusting turnbuckle by placing two strips of paper near the ends of the bands and setting the brake till one of the pieces is just caught. The other piece should catch at the same time. If it does not catch at the same time—

3—Loosen the turnbuckle locknut.

4—Adjust the turnbuckle one way or the other till both strips of paper catch at the same time. This will show that both halves of the band are being applied simultaneously.

5—Set up the locknut.

6—Adjust the turnbuckle on the other brake in the same way.

7—Loosen the locknuts on the brake pull-rod yokes.

8—Adjust the length of the pull rods by removing the clevis pins and turning the yokes so that both right and left brakes take hold at the same time and hold with the same grip. The pedal may be blocked.

9—The clearance between the band and the drum can be adjusted backwards or forwards by the adjusting screw in the brake-band anchor pin.

#### Burning In Bearings on a Ford

Editor Motor World: We have heard the phrase "Burning in bearings" frequently in reference to Fords. What is this process, what equipment is necessary, and are they burned in dry or with oil?—Standard Garage, Allan, Sask., Canada.

Burning in bearings is a process by which the surface of the babbitt bearings is melted by friction so that it fits the shaft perfectly without recourse to scraping, which requires time, skill, and extreme accuracy. Briefly, the process consists in setting the engine in some kind of a stand, setting the bearings up

pretty tight and running them without oil from a power line. There are, however, a number of precautions that have to be observed in the process that make it almost imperative to employ special equipment which is designed for the particular purpose. There must be some kind of clutch to start and stop the engine, and means must be provided so that the operator can test the slackness in the bearings from time to time. Without these two essentials, successful burning in of bearings cannot be accomplished.

#### Burning-In Stands

The usual burning-in stand for Fords consists of a sturdy and solid metal support with arms to catch the two side engine supports and one in the front to catch the front engine bearing. These are provided with quick-action clamps so that the engine can be quickly and securely fastened to the stand. In back of this is mounted a friction clutch on one side of which is a belt pulley to be connected to a line shaft or other source of power, and on the other side is a large hand wheel and a square fitting which enters the broached hole at the rear end of the Ford clutch shaft. With the belt pulley revolving, when the friction clutch is thrown out the Ford engine is idle, but the hand wheel can be turned back and forth to test the tightness of the bearings. When the friction clutch is thrown in the Ford engine shaft is revolved at a speed of about 250 r.p.m.

The heat developed by the friction melts the skin of the babbitt bearings and they shape themselves accurately around the shaft. The process has to be stopped at the right time, or otherwise the bearings would be burned out instead of being burned in. The correct time to stop is best found by experience, and it is just after they start to loosen up appreciably.

After burning in, the crankcase is cleaned of any bits of metal and is then run in for a short time, with oil to polish up the bearings.

#### Little Time Required

Burning in a set of bearings takes only a few minutes, and brings the bearings down at once to a correct fit, and after running in oil they will not have to be taken up again, whereas with scraping the process takes from 4 to 18 hours, depending on the skill of the workman and the accuracy with which they are fitted. Burning in makes a more perfect bearing and reduces expenses in the operation. A Ford owner, as a rule, does not care to pay the high price necessary to properly scrape in a set of bearings, consequently, in order to cheapen the job it is often half fitted, and the owner soon develops a knock in his bearings and is dissatisfied.

Some manufacturers of special equipment for burning in bearings are: G. H. Dyer Co., Cambridge, Mass.; E. J. Miles & Co., Newton, Iowa; Nazett Mfg. Co., 1440 Washington Street, Eldora, Iowa. Service Station Equipment Co., 223 West Schiller Street, Chicago. Western Mfg. Co., Oskaloosa, Iowa.

The editor of this department is glad to answer questions. In sending queries, always include copies of contracts, notes, etc., to which you refer.

# THE LAW

By George F. Kaiser

As It Applies to  
Dealers  
Repairmen  
Garagemen

## Tried a "Fast One"

Editor Motor World: We would like to have a ruling from your department on a case containing the following facts:

An owner who was storing his car in a garage claimed that a motor meter was stolen from his car. He approached the garageman, who had been absent from his place of business, with the statement that the nightman and the proprietor's wife were aware of the fact that the motor meter was on the car when the car was stored.

The garageman, in spite of the fact that he has a large sign stating that he is not responsible for articles left in cars, or that are not checked at the office, paid the owner \$10 for the purchase of a new motor meter.

After having paid the \$10 the garageman found that the owner had lied in regard to the knowledge that the proprietor's wife and nightman had of the situation and tied up the car. The owner then secured the services of an attorney, and the attorney advised the return to the garageman of the \$10 and storage due, and to remove his car. After the car had been removed from the garage the owner then commenced suit in the form of \$75 damages and costs.

We have no cases on record in our courts of a similar nature, and we would like to have you submit your opinion upon receipt of this letter, as the case has been called to trial for the 15th.—Harry G. Moock, Rocky Mountain Automobile Trades Association, Denver.

Answer—Although it is not stated in the foregoing letter what the suit for \$75 was brought for, I suppose this suit must have been brought for damages for loss of use of the car while it was held by the garageman. If that is the case and the car was a passenger car, I think that your member's customer will have difficulty in recovering anything. If, on the other hand, the car was a commercial vehicle and was wrongfully detained by your member, the customer would have the right to recover from your member the amount it cost him to replace the detained car by hiring another one to use in its stead.

## The Service Coupon Problem

Editor Motor World: Noting your article on page 40 of this week's Motor World entitled "Boston Worrying Over Service Coupon Books," it might be of interest to some of the dealers who have coupon books in force to know that we adopted the following plan:

We formerly gave with the purchase of an Oldsmobile a coupon book for 50 hours' free service good for a period of one year. Our charge for labor is \$1.25 per hour.

When a customer brings his car into our service department and has some unexpired service we explain to him that we will fulfill our contract on a fifty-fifty basis; that is, for example, if the work consumes four hours we apply two hours against his unexpired service and charge for two hours at \$1.25 per hour, which in reality means that we are receiving 62½ cents per hour for our labor. We have, however, extended the time limit on service books until used.

This not only permits us to keep the customer satisfied but gives us approximate cost for our labor charge, and, in addition, insures a continuance of the patronage of our customer.

We have found a few customers who have demanded that we render the free service as per contract, and of course in these instances we make no charge whatsoever, merely applying the time against their unexpired service.—De Luxe Automobile Co., P. H. Brockman, St. Louis.

## About Tire Stock

Recently readers have inquired about tire companies which have been offering stock for sale. The reply we made was that before investing in any enterprise every man should make a careful investigation. Readers may, however, be interested in an item which appeared recently in the New York *Tribune* concerning two rubber companies. It said:

"The Alliance Tire & Rubber Co. promoters are now under indictment in the Federal Court. The case has not yet reached the calendar for trial, but we are informed that it is ready for trial and will be tried as soon as reached.

"You are right in your supposition that there is a similarity. Warren C. Daniel is a brother-in-law of Nicholas Field Wilson, who was the leader in perpetrating the Emerson fraud. The Associated Advertising Clubs of the World have an interesting pamphlet on the Alliance Tire & Rubber Co. You can obtain this by writing to them at their headquarters in the Merchants' Bank Building, Indianapolis, Ind."

"The Johnstone Tire & Rubber Co. was originally organized as the Globe Tire Co. under the laws of Arizona. It derived its name from Samuel Johnstone, who is alleged to be the inventor of a hard rubber tire which it claims also

has the resiliency of a tube. The company originally had its headquarters at Sacramento, Cal.; later it removed to Chicago and entered into a contract with Emil W. Zinser and J. Monroe Weil to sell its stock. Under this contract Zinser and Weil were to receive 50 per cent of the receipts and in addition were given a bonus of 100,000 shares of the company stock. The company claims that it owns a plant at Laporte, Ind., which cost \$20,000, but is encumbered by a mortgage of \$13,745. It also claims to have \$12,000 worth of machinery.

"It has been selling its stock in small allotments over the country, and we are informed that much of it has been sold on the installment plan. No market has been created for the product and we are able to learn of no practical rubber man connected with the concern. The company was organized over four years ago. Its stock has been on the market ever since. During that time the only endeavor to manufacture and market the product of which we have been able to learn is as stated above."

## Dead Storage

The Court of Appeals of New York has just decided that when a car owner directs his chauffeur to place his car in dead storage and instructs him not to use it without express permission the chauffeur has no implied authority to violate his employer's orders and take the car out for the purpose of testing it without his knowledge or consent.

It was further held that under the New York Penal Law, paragraph 1293A, providing that unauthorized use of an automobile shall constitute a crime of larceny, a chauffeur who uses a car without his employer's knowledge or consent and contrary to his instructions, as above, is guilty of larceny.—Rose vs. Balfe, 119 N. E. (N. Y.) 843.

## Registering Jitneys

In order to bring a motor car, which is not a jitney, within the requirements of a law as to the registration of public service vehicles there need not be in connection with its use a solicitation of patronage in the sense of personal persuasion of earnest entreaty or importuning or any resort to the use of the voice, for solicitation may be practised by other means than words, and any acts or conduct intended or calculated to invite the patronage of intending passengers amounts to solicitation, was the decision in another recent case.

# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1546—PRESSURE CLEANING TANK

A pressure-cleaning tank for spraying gasoline or kerosene on greasy parts or for use with a gasoline torch is made by converting a style E Prest-O-Lite tank. The filling is removed by soaking it in warm water and then pulling it out with a wire which has a small hook on the end. A bicycle repair valve is soldered on the upper part of the tank to connect to the air pump, and a valve on the top admits the liquid. The liquid is conveyed to the work through a length of  $\frac{1}{8}$ -in. copper tubing and the amount is controlled by a valve.—Kelsie Click, Berne, Ind.

## No. 1547—SCREW-JACK ARBOR PRESS

An arbor press is made by fastening the base of a screw jack to the upright of a frame constructed of heavy timber supported and braced with irons and bolts. The flat base is made 4 ft. 6 in. wide by 5 ft. long, the lengthwise timbers being 6 x 8 in. and the transverse pieces 2 x 6 in. The uprights are 4 x 4 in. and the top pieces 12 x 12 in. The screw-jack is bolted to the bottom of this top piece with long bolts and straps. Pieces of 1-in. round iron run diagonally from the top piece to the ends of the flat base.—A. L. Bennett, Buffalo, N. Y.

## No. 1548—RIVETING HORN

A riveting horn for brake bands, rims, etc., is made from a piece of  $1\frac{1}{2}$ -in. round steel, one end of which is bent at right angles. Two holes are drilled through the bar and pins are inserted. With the grip of the vise and the aid of the pins, the horn or stake will not move when riveting is done.—Charles H. Willey, Concord, N. H.

## No. 1549—A HOIST FOR FORD REAR ENDS

This is a device to hook into the Ford frame so that the entire rear of the car is lifted with a chain hoist or fall. It is made of 1-in. bar iron bent to the dimensions given so that the ends will catch in the channels of the frame and the hook of the hoist

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

*1—Describe the shortcut briefly but clearly, in few words.*

*2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.*

*3—Write on ONE side of the paper only.*

*4—Sign your name and initials, the name of the company you are with, and the town.*

*Write plainly. If your name is unusual, print it in capital letters.*

will go into the loop.—R. E. Lee, R. T. Edwards Motor Co., Rocky Mount, N. C.

## No. 1550—COMBINATION SOFT AND HARD HAMMER

A combination hammer which has one hard face and one soft face is made by softening the ball end of a ball-pein hammer, grinding off the ball and drilling a hole. A brass plug is made with a shoulder which fits into the hole and is held there by means of a pin.—Charles H. Willey, Concord, N. H.

## No. 1551—S-WRENCH EXTENSION FOR LEVERAGE

An extension for S-wrenches to provide additional leverage is made from a piece of flat stock with two lugs. The lugs are bent over so as to

grasp the handle of the wrench, there being sufficient distance between the lugs to withdraw the wrench by turning it sideways.—Charles H. Willey, Concord, N. H.

## No. 1552—ADJUSTABLE RADIATOR REPAIR STAND

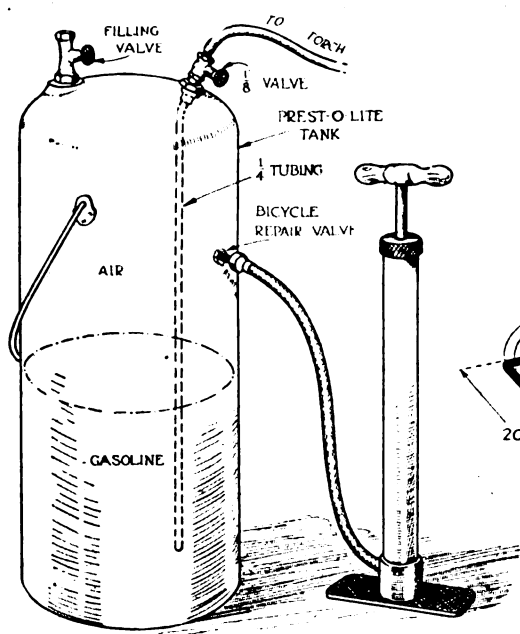
An adjustable stand for holding radiators while repairing them is made from pipe and pipe fittings. The table which supports the radiator is made of  $\frac{3}{8}$ -in. pipe and fittings and is swivel-mounted on a side extension of the upright pipe, which is  $1\frac{1}{4}$ -in. pipe. This side extension is a piece of 1-in. pipe which goes through the tee on top of the upright, the tee being babbitted and having a lock to clamp the extension. Chains with springs in the middle and hooks at the ends enable the radiator to be held in any position. The stand tilts in any direction.—Kelsie Click, Berne, Ind.

## No. 1553—WASHER HOLDER

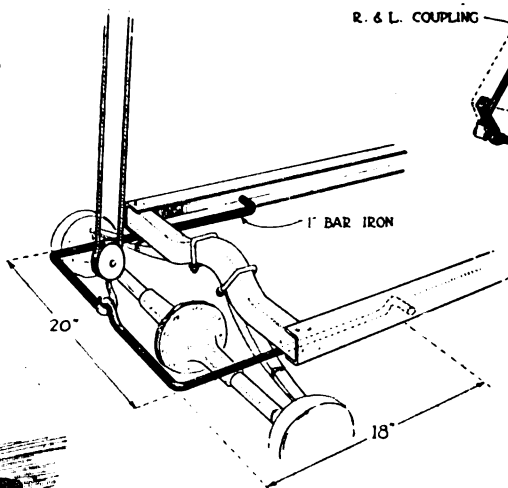
A device for conveniently holding different size washers is made from two or more pieces of 2-in. plank. The holes for holding the washers are bored in a circle. The pieces are bolted together and the outside edges sawed or turned so as to leave the outside of each washer hole open. A piece of  $\frac{3}{4}$ -in. board is used for a base and the entire device is suspended from a bracket by a bolt through the center, which permits it to be revolved.—Charles H. Willey, Concord, N. H.

## No. 1554—SLOTING TOOL FOR SHEET METAL

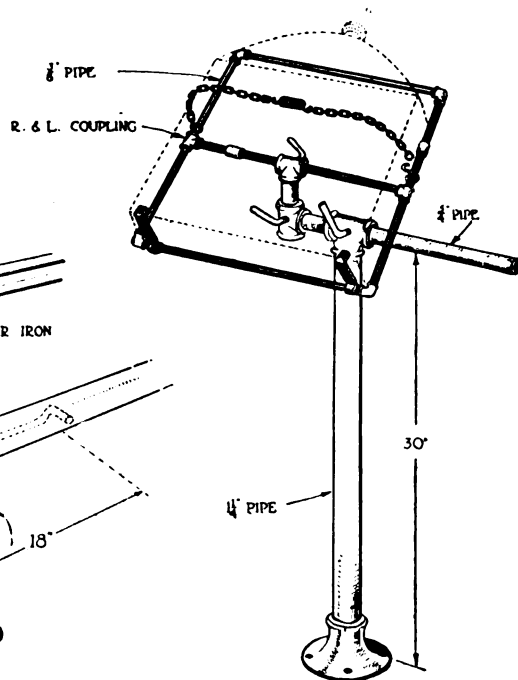
A tool capable of cutting a slot in sheet metal is made from a piece of hexagon tool steel about 7 in. long. The cutting end is forged somewhat like a cold chisel except that it is blunt and has a cutting clearance so the metal will curl away from the tool as the cutting proceeds. A hole is drilled to start the tool and the corners of this are afterward filed out square.—Robert A. DeForest, Syracuse, N. Y.



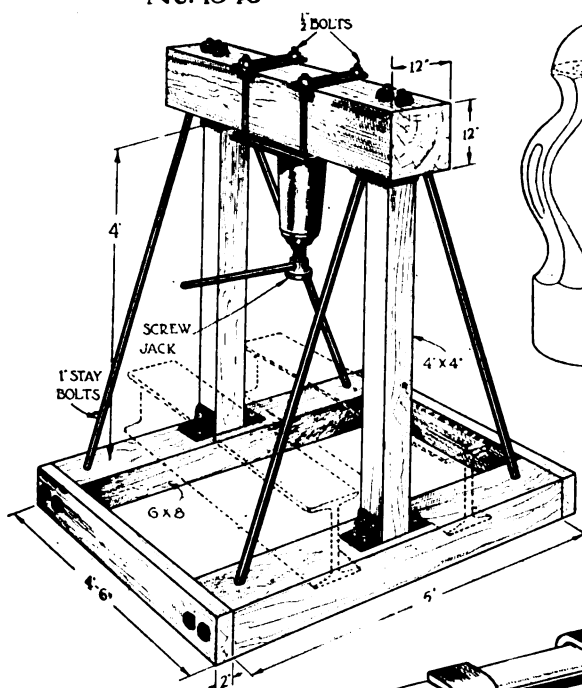
No. 1546



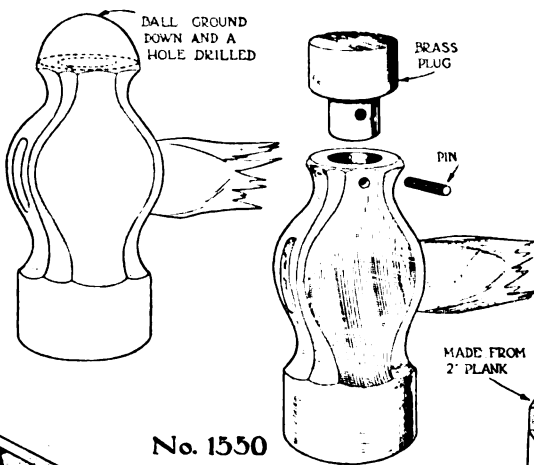
No. 1549



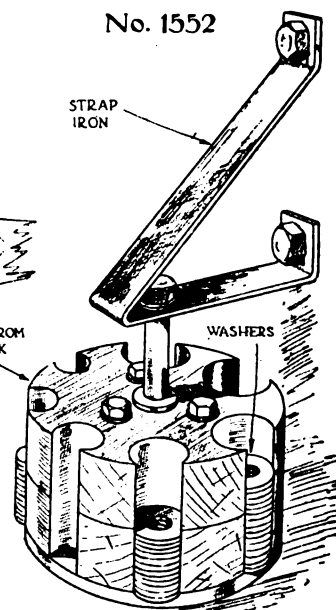
No. 1552



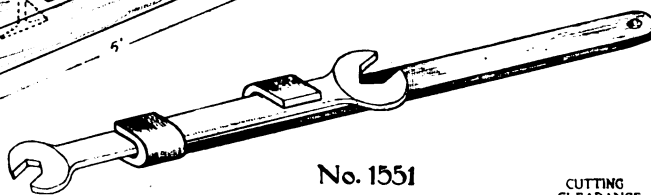
No. 1547



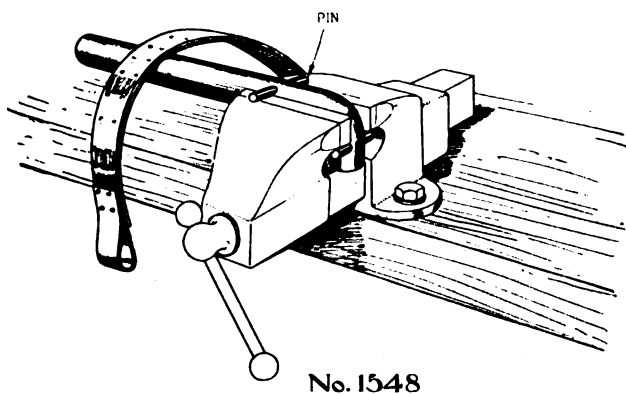
No. 1550



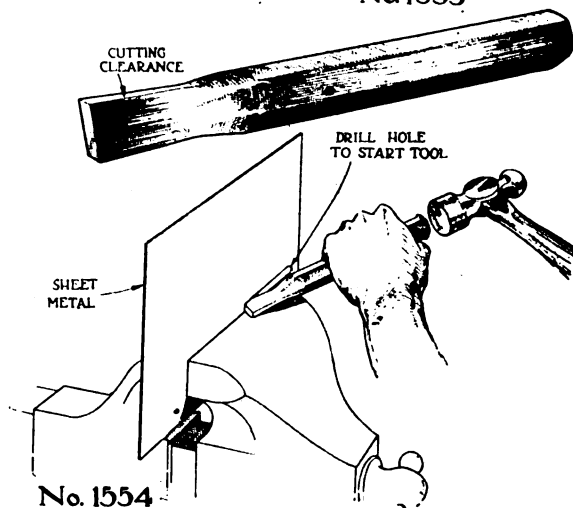
No. 1553



No. 1551



No. 1548



No. 1554



# Editorial Observation

## Don't Rock the Boat—Row

**I**N jobbing circles there is rumor that some jobbers have been shipping goods back to manufacturers with a demand for credit, on the grounds that the country is going to pieces and the jobber should get his money out of his stock and in that way be on the "safe side."

Much that has been so shipped is said to be stocks that have not been moving as rapidly as might be desired.

Perhaps dealers too have been doing the same thing.

It is a questionable method. Whether there is justice in it is not to be debated here, but we want to ask whether the tradesman who rushes madly into such tactics as this isn't suffering from an over-heated condition due to his inability to maneuver in troubled waters without unduly rocking the boat.

In days like these we need men with level heads. We need men who can go through rough waters with

their hands on the oars instead of standing up and wildly waving their arms in the air.

The same thing applies to all other business activities. Know what you are doing before you do it. Figure out where you're going to land before you jump. Don't wildly discontinue this and that and run around in rings. Going off half-cocked is about as far from patriotism as anything can be. Where would Foch be if he went off half-cocked? And why shouldn't all the rest of us be just a trifle analytical about a few of our ordinary every-day activities?

Some dealers long ago yelled wildly and wanted to shut up shop. Yet until now there has been quite a lot of cars to be sold. Who would have sold them if the fanatics had prevailed? The industry still needed the dealers. It is time to take action when the right time comes. And when the right time comes we'll all know it. Don't rock the boat—row.

## Work or Fight?

**I**N the application of any law by local officials there is always the possibility that differences of opinion may arise. One official may rule one way and another in a different way. And both may be right or wrong.

It is stated that some of the local labor boards in some sections have ruled that the service station mechanic, especially if engaged in the less specialized forms of work, is engaged in a non-essential occupation and must get a new job or be listed as a prospective soldier.

Inasmuch as there are 40,000 shops, garages and similar establishments in the United States, it is possible a great variety of rulings may have been encountered by the trade. Some of these may have been just, if they require men to leave work which can just as well be performed by women. And rulings which require men to leave work that cannot be performed by substitutes are obviously unjust.

Of course, the Government desires the use of labor

to its maximum possibilities, but it does not want to work injustices. Often headquarters is not aware of the rulings made locally, and, for the purpose of ascertaining the situation nationally, Motor World asks its readers to write at once, stating the manner in which the regulation of labor is being handled in various sections.

If this information indicates that the local boards are making any rulings which seem to be at variance with the spirit of the law means may be found to straighten out the situation. Therefore, please **WRITE US HOW THE WORK-OR-FIGHT RULES ARE BEING APPLIED TO THE AUTOMOTIVE TRADE IN YOUR LOCALITY.** And please write **AT ONCE.**

If the rules are being equitably enforced let us know that. And if they are being enforced in a manner that you consider inequitable please let us know that also. Let's have the good and bad sides of the situation.

## Letters from Readers



*"After 60 days' try-out," says the Chanslor & Lyon Co., "we find the work these women are doing in receiving, packing and shipping goods is most satisfactory"*



### *Women Shipping Clerks*

San Francisco.

Editor Motor World: I am enclosing some kodak pictures showing our present shipping force in the Seattle store. I do not know whether or not you can make use of anything of this nature, or whether the films are clear enough to reproduce, but if in your opinion the readers would be interested, will say that after sixty days' tryout we find the work these women are doing for us in receiving, packing and shipping goods is most satisfactory. They do their work well, as directed, and consequently there is a much better atmosphere surrounding the difficult situation than we have experienced for a year past in a city where the labor situation is most serious.

CHANSLOR & LYON CO.,  
P. H. LYON.

### *She Washes Well*

Rochester, N. Y.

Editor Motor World: We are forwarding a photograph of the woman who is doing our washing.

In addition to this innovation, we have been compelled to employ women as stockkeepers, both for checking in and out tools to the shop and supplying customers with accessories. We have eliminated entirely the men from this department, and we also have some in our repair shop, doing the actual repairing, the same as the men.

In this connection much depends on the women. We have not sought them out at all; they have applied to us and begged for a chance at the different duties. Under these circumstances it is more natural to expect them to be suc-

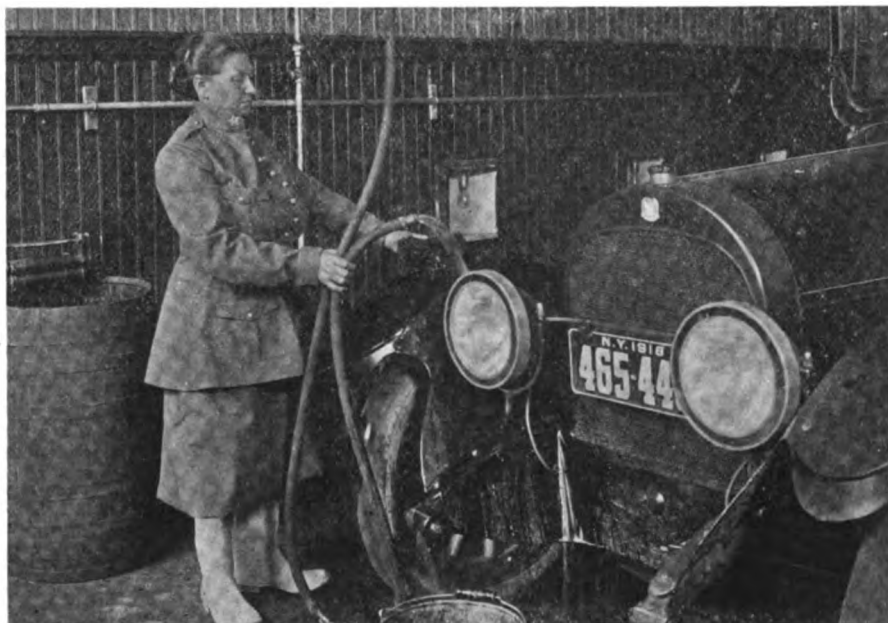
cessful than if they came just out of curiosity because of an advertisement, and in each case they have expressed the belief that in time women will be employed more generally in the repairshop, and that the early ones, securing the necessary information, will naturally act as instructors to those who come later, therefore giving them a better position both financially and otherwise. In the near future we hope to send other photographs.

We are particularly interested in the Motor World of July 31, but we believe we have gone one step further than any-

body else, because we have placed a woman in full charge of the wash rack and in the repairshop, where there is no partiality shown, excepting in the heavy work.

As to their wages, we are paying them at the same rate as the men, although on the wash rack they do not work the same number of hours that the men used to work, because, as you know, they were long hours, from 7 to 7 o'clock, as a rule.

We are pleased to report that very satisfactory progress has been made by these loyal women. They evidently like the work and take it upon themselves to do it, both from a patriotic sense and because they believe they are more independent as well. We believe the curiosity element is not much in evidence, ex-



*This woman does all the car washing for the J. Lawrence Hill Co. She likes her work, and so does the J. Lawrence Hill Co.*

cepting, of course, with some applicants, whom we readily detect. We never employ a woman who seems to have a surplus amount of this womanly characteristic, as we run our business upon a strictly business basis, eliminating sentiment and curiosity from it.

We have a special room set aside with lockers for them and facilities for changing their clothes, etc., as this must necessarily be one of the first things employers must take care of.

We are laying plans for the training of women in the different branches of our business through the medium of evening classes.

We contemplate having two evenings per week of two hours' duration each for a period of seven weeks. In these lessons we shall take up the business as a whole in the first two or three lessons; after that we shall give an option to the students as to which department they wish to get the most extensive instruction in, whether that shall be gas engine repairs, electrical, covering the entire electrical repairing of cars, or in our storage battery department, all of which are supervised by competent men, and we expect from these students to be able to select a sufficient number to be placed on our payroll, as it is very evident that we have to come to the class for help if we desire to remain in business.

We thank you for the encouragement in your letter and shall be more than pleased to advise you later as to the success of our contemplated enterprise.

J. LAWRENCE HILL CO., INC.,  
Per J. LAWRENCE HILL.

### Worth More Than \$2

Editor Motor World: I have received the second copy of Motor World and wish to state that I appreciate it as the best motor magazine I have ever had, and worth more than the subscription price at \$2 per year.—C. E. Kling, Phila.

## The Rubber People Want You to Read This Letter

Editor MOTOR WORLD: Enclosed herewith you will please find a letter which the War Service Committee of the Rubber Industry desires to have given wide publicity.

From the standpoint of common interest, I presume that it will be agreeable to you to publish it as a news item, as the obvious intention is for the contents of the letter to promptly reach all retail tire dealers.—M. L. HEMINWAY, Secretary, War Service Committee of the Rubber Industry of the U. S. A.

### To All Tire Dealers

*This Committee has frequently had brought to its attention newspaper and trade paper reports and other rumors, erroneous either in whole or in part, as to the attitude of the Federal Government as expressed by the War Industries Board in connection with the manufacture, distribution and purchase by users of pneumatic automobile tires.*

*In connection with the National War Program, the Government desires to help and induce all to save unnecessary investments in materials, unnecessary expenditures of money, and unnecessary employment of man power.*

*In connection with our National Shipping Program, they also desire to save shipping space.*

*Such limitations as have been made in the importation of supplies of crude rubber have been made after a full conference with the Industry, and it is the intention of the War Industries Board to endeavor to see that the country has all that it actually needs without any undue hardship. Any restriction in the production of pneumatic tires is made after a review of the conditions of stocks in the hands of manufacturers throughout the country, for the purpose of reducing unnecessary investments in tires, and you are urged to aid in this national program and to prevent, so far as lies in your power, any hoarding of tires, or any unnecessary purchase or anticipation of needs on the part of distributors, dealers or owners.*

*We are confident that a sufficient quantity of tires will be manufactured to take care of the cars that will be permitted to be run, and the Government will look with stern disfavor on any profiteering or hoarding and will act accordingly.*

*Your patriotic and hearty co-operation is solicited.*

*Yours very cordially,*

WAR SERVICE COMMITTEE, RUBBER INDUSTRY,  
B. G. Work, Chairman; H. E. Sawyer, vice-chairman; E. H. Broadwell, H. S. Firestone, J. N. Gunn, G. B. Hodgman, P. W. Litchfield, C. T. Wilson;  
M. L. Heminway, Secretary.

### Keep Track of Tires

Editor Motor World: Enclosed find a blank that we have printed for sending in with tires for adjustment.

We find that the tire people appreciate it, and it keeps a nice record, besides eliminating a lot of stenographic work.

Of course more than one tire could be listed on this blank if it was printed slightly different, but we find that by only listing one tire on each blank we are able to give each adjustment individual attention—Clarinda Hardware Co., Clarinda, Iowa.

The court in a recent New Jersey case decided that where a person obtained possession of a motor car by replevin and has it repaired, and judgment is rendered in favor of the other party, the latter is entitled to possession of the car without paying for the repairs, and when he brings an action on the replevin bond it is no defense that there is a lien on the car for the repairs.—Naylor vs. Knapp, 104 Atl. (N. J.) 131.

Clarinda, Iowa, ..... 191.....				Our Number 1212.....		
To .....						
.....						
Gentlemen:—We are today sending you by..... the following tire for adjustment, charges.....						
MAKE	SIZE	RIM	TREAD	SERIAL	OWNER	MILEAGE RUN
Remarks.....						
Please advise promptly what adjustment you will make before making replacement.						
Very truly yours,						
CLARINDA HARDWARE CO.						
By.....						

When you send tires back for adjustment, do you have trouble? This form straightened everything out for the Clarinda Hardware Co.

# The RETAIL NEWS

## PACIFIC COAST

Charles H. Fitch has become sole owner of the Petaluma Auto Repairshop, Petaluma, Cal.

C. S. Niles, Overland dealer at Petaluma, Cal., has moved from Vieller Street, to the former Ford Garage on Main Street.

W. H. Watson has opened the Park Garage on Main and Cassia Street, Redwood City, Cal.

M. Lerer & Sons have added a tire department to their business on East Washington Street, Petaluma, Cal.

Van Bebben & Bros., have moved their garage to a new building on Main Street, Petaluma, Cal.

The Franklin Vulcanizing & Tire Co. has been established at 1596-98 Market Street, San Francisco.

A. M. Myers has purchased the tire store and vulcanizing plant at 3310 Broadway, Oakland, from E. G. Stuart.

G. A. Erb has opened a branch office of the Aderholdt Mfg. Co., of Denver, Col., at 2329 Broadway, Oakland, and will merchandise Aderholdt's moisture carburetor.

Davie Vulcanizing Co., Vancouver, B. C., has moved from 1234 Gravelle to a new location at 636 Davie Street.

The Kelly Tire Sales Co., Portland, has been formed by J. H. Ainscough and R. R. Lawes, to handle the entire state of Oregon for Kelly-Springfield tires. Quarters have been opened at 335 Ankeny Street.

B. & W. Auto Co., Everett, Wash., has opened a repair station at 2806 Wetmore Avenue. C. E. Bonnell and J. A. Whiteman constitute the firm.

Charles Copel, Portland, has opened a Buick repairshop and service station at Sixteenth and Jefferson Streets.

E. F. Bradley, formerly proprietor of the garage at Fourth and Grand Avenue, Los Angeles, has taken over John's Garage, located at 230 East Fourth Street, Long Beach, Cal.

H. Froelich has opened a vulcanizing shop at 221 Broadway, Long Beach, Cal.

## SOUTHWEST

P. D. Campbell, Angleton, Tex., has sold his garage business, known as the Auto Shop, to Ben Franks, who is in full charge.

F. L. Sweet & Co., Eagle Pass, Tex., have leased the Star Garage from Messrs. Boardman and will conduct a garage, service station and machine shop.

The L. A. Murff Sales Co., Houston, Tex., is closing out his business at 915 Main Street, on account of going into U. S. service.

La Shore & Parker have opened a repair shop at 25 Second Street West, Hutchinson, Kan.

R. R. Mills has opened an Ignition repairshop at 1316 Sherman Street, East, Hutchinson, Kan.

W. S. Waers has opened a repairshop at 824 South Main Street, Hutchinson, Kan.

C. H. Price has opened a tire repairshop at Larned, Kan., and will be known as the Price Tire Service Co.

Fuller & Shelton have leased the shop of the Central Garage at Emporia, Kan.

J. A. Kieffer & A. E. Bayha have opened a garage at Emporia, Kan., and will do business under the style of The Paige Service Garage.

W. C. Cotter has opened a vulcanizing shop at Florence, Kan.

D. T. Williams has bought one-half interest in the Beaton Bros. garage at Peabody, Kan.

Helms Electric Service Co. has moved into a new building at 100-102 Sherman Street West, Hutchinson, Kan.

Alex Shank, Peabody, Kan., will open a tire and tube vulcanizing shop in the Delt-rich Building.

O. E. Fryberger, Soldier, Kan., has secured the agency for the Chevrolet in this territory.

Elmborg Brothers, Winona, Kan., sold their garage and blacksmith shop to Mr. Milton.

Geo. Williams, Marlow, Okla., has purchased Mrs. John Williams' interest in the Marlow Auto Co.

Clarence Scott, Arkansas City, Kan., has opened a service station at 106 North Summit Street.

D. O. Gaddis, Athol, Kan., has bought the Bullard barn and will open a garage and blacksmith shop.

Charles Taylor, Bonner Springs, Kan., has sold his interest in the Golden Belt Garage to his partner, C. L. Jackson.

Mizell B. Ward, Arcadia, Kan., is successor to W. L. Jones as manager of the Arcadia Garage.

W. C. Neill, Effingham, Kan., has moved his stock of tires, tubes and belting to the Riley English Building.

The El Dorado Tire Service Co., El Dorado, Kan., has opened a repairshop.

C. F. Baxley, Humboldt, Kan., has bought a half interest in Ludlum Bros. Garage.

The Hill-Howard Motor Co., Hutchinson, Kan., has moved from 129 Sherman East, to 122-24 Sherman East.

The A. C. King Auto Supply Co., Hutchinson, Kan., has installed a complete tire repair vulcanizing plant at 821 South Main Street.

Floyd Behmer, Morrill, Kan., has opened a garage at Salem.

J. M. French and G. P. Freeman, Oswego, Kan., have dissolved partnership in the garage business at Oswego and Hallowell under the firm name of French & Freeman. Mr. French will continue the business at Oswego and Mr. Freeman will conduct the business at Hallowell.

The White Way Garage, Waterville, Kan., is successor to the Merchants Auto Co.

Joe P. Neal & Co., Dallas, Tex., have opened a service station at Main and Austin Streets, under the personal supervision of Mr. Neal.

The Houston Auto Dealers' Association, Houston, Tex., has changed its name to The Houston Trade Association.

Albert Frele, Beeville, Tex., has disposed of his garage interests.

H. W. Steer, Chandler, Okla., has sold his garage business and service to W. H. Hicks.

Alex Thomas, Camanche, Okla., has charge of the Camanche Garage, formerly owned by B. E. Goff.

The Rice Garage, Porter, Okla., has been leased to Glenn Agee.

I. Rowe, Ramona, Okla., has purchased the Munsey Garage.

C. F. Siron, Sulphur, Okla., is the proprietor of the Metropolitan Garage, which is now

open for business in the old Metropolitan Building.

J. W. Rush, Hobart, Okla., has closed his garage.

W. B. David, Broken Bow, Okla., is successor to Overturf Garages.

John Davis, Frederickstown, Mo., has closed his garage.

Sam R. Hicks, Holland, Mo., whose business was destroyed by fire some time ago, will rebuild and add farm implements to his garage.

A. & C. Automobile Co., Joplin, Mo., dealer in supplies, will suspend business.

Thomas Donallins, LaPlata, Mo., is successor to the McCumber Motor Co.

Henry Cottom, Cherryvale, Kan., has sold the Oil Belt Garage on East Main to Arthur Medsker.

T. H. Traynor, Dodge City, Kan., has disposed of his interest in the City Garage and Machine Shop to C. F. Royse, who has assumed, with Carl Fay, the active management of the garage.

Lincoln H. Fielder, Enterprise, Kan., has purchased R. A. Dalton's garage business and machinery.

Frank Snell, Leroy, Kan., has opened a garage on South Main Street, which will be known as the White Front Garage.

The Tire Hospital, Liberal, Kan., E. N. Bowman, proprietor, has moved to the room vacated by the Borderland Trail Garage.

Stanton and Grant Gregg, McCune, Kan., have purchased the Coluburn & Son Garage.

The Covault Garage, Neosho Falls, Kan., was destroyed by fire.

Bert Hoover, Onaga, Kan., has purchased the repair business of McCabe & Son.

Ralph Curby, Ottawa, Kan., will open a new establishment at 113 West Third, to be known as the Curby Motor Sales Co. He will deal in used cars, Dodges and Fords mostly, and will also handle tires, tubes and accessories.

G. L. & O. A. Selder, Ottawa, Kan., have sold the garage at 409-11 Main Street, to J. J. Jones of Tulsa and R. C. Reynard of Douglas, Okla.

The Standard Oil Co., Pittsburgh, Kan., is erecting a new filling station at 101 South Broadway. It is in the market for gasoline tanks, pumps and pipe.

Dr. J. H. Jimmerson, Asher, Okla., has opened his new filling station at the southeast corner of Main and Ninth Streets.

John Orr, Braman, Okla., is beginning work on a new brick and tile garage.

The 555 Tire & Vulcanizing Co., Little Rock, Ark., is preparing to greatly enlarge its rim department.

The Allen Garage, Burns, Kan., successor to the Smith Garage, is handling supplies and accessories, Chevrolet and Ford cars and will do general repair work.

Edgar Applebee & Son, Jewell, Kan., are successors to Drake & Getman in the garage business.

Bert Breon Garage, Kensington, Kan., is successor to Breon Bros. Garage.

The Auto Electric Co. is the name of the new Eveready Service Station at Manhattan, Kan., which has been moved to the Dewey Garage.

M. D. Williams, Norton, Kan., has installed a battery and tire repair station in the Kennedy Building formerly occupied by the Buckley & Greenfield Garage.

The Cope Garage, Norton, Kan., has been sold again to the Norton Motor Co. The firm was composed of Jim Burrows and Kirkman. Sherm Fordice took over the tire business.



## New Garages

Hill Brothers.....Peculiar, Mo.  
 Lewis Brothers.....Farber, Mo.  
 Isaac Adair.....Clinton, Mo.  
 J. A. Woodson.....Hunter, Okla.  
 Treadwell Garage.....Bennington, Okla.  
 A. L. Derby.....Wichita, Kan.  
 Fred Wise.....Effingham, Kan.

## MIDDLE WEST

Harry Scott, Kalamazoo, Mich., is turning from automobiles to essential war work and is fitting out the machineship of his garage at 432 West Main Street to care for the new line of industry. At the present time he is working on a sub-contract for the Diesel Engine Co. and is in line to get contracts for machining airplane and truck parts.

The Retread Tire Co., Fond du Lac, Wis., has opened for business at 175 South Main Street. The concern uses the "Dri-Kure Retreader" process and also does a general tire repair and supply business.

The Bemis-Adams Motor Co., Oregon, Ill., is now the property of B. B. Bemis, who has purchased the half interest owned by Mr. Adams. Mr. Adams is preparing to assume the duties of superintendent of standards, an appointment tendered him by Governor Lowden.

The R. T. Tire & Retarding Co., Marinette, Wis., has moved its plant from Pierce Avenue to a new location on Hall Avenue, where much additional floor space is provided. Edward Rogge is manager.

## New Garage

H. H. Brey.....Dundee, Ill.

## NEW TRUCKS AND TRACTOR DEALERS

The Becker Auto Co., Grand Rapids, Mich., has secured the distributing agency for the Republic truck in the western half of Michigan.

The Reno-Bulck Co., Hutchinson, Kan., has taken the agency for Republic trucks.

Western Auto Co., Portland, has taken over the agency for the Fageol trucks and farm tractors in the state or Oregon.

Northwest Auto Co., Portland, has recently taken over the agency for the states of Oregon and Washington for the La Crosse Happy Farmer and Sandusky tractors.

J. H. Madison, owner of the California Garage at Petaluma, has secured the agency for the Cleveland tractor.

United Motors Co., Seattle, has secured distribution of the Happy Farmer and Sandusky tractors for the state of Washington.

Duplex Truck Co., of Lansing, Mich., has appointed the following dealers: Dinsmoor & Co., St. Marys, W. Va.; Howell Motor Company, Baltimore, Md.; W. Z. Davis, Miami, Fla.; Purdy Motor Company, Tulsa, Okla.; Stewart Motor Sales Company, Reading, Pa.; Capital Motor Car Company, Columbus, Ohio; R. P. Taber, Inc., Hartford, Conn.; G. A. Lewis, Mankato, Minn.; Sears Auto Company, Des Moines, Ia.; Heath Auto Company, Sioux City, Ia.; Murphy Machinery and Equipment Company, Memphis, Tenn.; Franklin Motor Company, Richmond, Va.; Reo Motor Sales Company, Parkersburg, W. Va.; Fawkes Auto Company, Minneapolis, Minn.; Spooner-Campbell Company, Gouverneur, N. Y.; McChesney & Montgomery, Lewistown, Mont.; Security Motor Company, Kansas City, Mo.; Joseph Maw & Company, Winnipeg, Can.; United Garage Company, Toledo, Ohio; Garden City Garage, Missoula, Mont.; Duplex Truck Sales Company, Nashville, Tenn.

The Naeve Car Co., Huron, S. D., has been appointed distributor of the Cleveland tractor.

Miller S. King, Aberdeen, S. D., has taken on the sale of Cleveland tractors.

The S. D. Wheelock Auto Co., of Fargo, N. D., has secured the distributorship of the Cleveland tractor for that territory.

E. H. Morrow, Williams Bay, Wis., has been appointed dealer of the Moline Universal tractor in Walworth County, Wis.

A. Wilson & Sons, Berlin, Wis., have been appointed distributors of the Once-Over tiller in Green Lake County. The Once-Over tiller is a new type of implement in the form of an attachment to a sulky plow and is operated by a small gasoline engine mounted on the plow frame.

The Clemens Auto Co., Des Moines, has become the distributor for twenty Iowa counties for the Cleveland tractor.

The Mitchell Automobile Co., distributor for the Mitchell, with main offices at 2334 Michigan Avenue, Chicago, and branch at 328 Broadway, Milwaukee, Wis., has secured the agency for Illinois, Michigan and Wisconsin for the Farmer Boy tractor, made by the Columbus Tractor Co., Columbus, Ohio.

The William Small Co., 600 North Capitol Avenue, Indianapolis, state distributor for the Chevrolet, has secured the agency for the Farmer Boy tractor, manufactured by the Columbus Tractor Co., Columbus, Ohio.

The Standard Truck Corp., 517 West Thirty-eighth Street, New York City, has been appointed distributor of Stegeman motor trucks for the Metropolitan district, southeast corner of New York State and the whole of New Jersey.

The Cleveland Tractor Co. has appointed the following new dealers: Standard Motor Sales Co., San Antonio, Texas; Houston Motor Truck Co., Houston, Texas; Tenison Blair & Frey Co., Dallas, Texas; Naeve Motor Car Co., Huron, S. N.; Mitchell Motor Car Co., Mitchell, S. D.; Wheelock Auto Co., Fargo, N. D.; Miller S. King, Aberdeen, S. D.; L. A. Kennedy, Duluth, Minn.; Kane-Cadillac Co., Buffalo, N. Y.; Roth-Cadillac Co., Erie, Pa.

The Frank P. Gmelin Co., Detroit, has secured the distributing agency for the Service truck for the eastern half of Michigan. The company also distributes the King, Briscoe and Olympian passenger cars.

C. G. Rowman, Kansas City, Mo., is now distributor for Kansas, Oklahoma and western Missouri of the Hession tractor. He has changed the name of his company from the C. G. Rowman-Diamond-T Truck Co. to the C. G. Rowman Truck & Tractor Co. He handles Diamond-T trucks and Auto-horse; he has a branch at Wichita.

The Southwest Motor Co., 1616-18 Grand Avenue, Kansas City, Mo., has obtained the agency for Jumbo trucks and will distribute them in the Southwest territory. The truck is manufactured by Nelson Brother's Truck Company, Saginaw, Mich.

The Kane-Cadillac Co., of Buffalo, N. Y., has arranged to handle Cleveland tractors.

R. A. Johnston has taken an agency for the Case tractor for Ottumwa.

The Hudson-Feenaughty Company, Spokane, Wash., have obtained the agency for Avery tractors in Inland empire territory.

The Mitchell Automobile Co., 528-532 Broadway, Milwaukee, distributor of the Mitchell and Selden trucks, has been appointed state distributor of the Farmer Boy tractor, manufactured by the Columbus Tractor Co., Columbus, O.

Acason Motor Truck Co., Detroit, Mich., has appointed the following new dealers: Dixie Motor Sales Co., Memphis, Tenn.; Harper Bros., Hackensack, N. J.; Henderson Motor & Supply Co., Grand Rapids, Mich.; Redwine Bros. Motor Co., Spiro, Okla., and Fort Smith, Ark.; Hawkins-Russell Motor Co., Atlanta, Ga.; W. H. Gibbons, St. Thomas, Ont., Can.; Bonner Acason Co.,

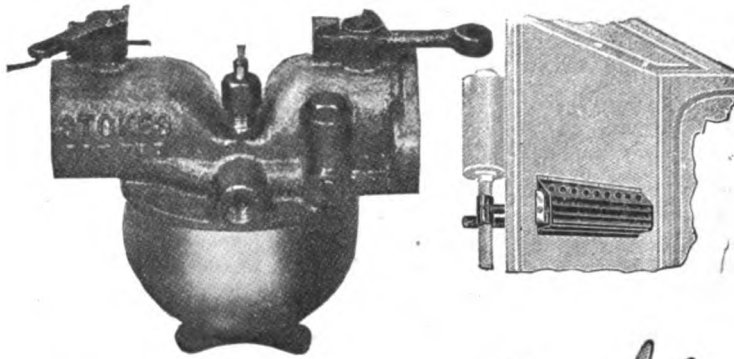
Norfolk, Va.; Ohio Oldsmobile Co., Cleveland, Ohio, and Sloan Motor Co., Greensboro, N. C.

The Duplex Truck Co. has appointed the following dealers and distributors: The Truck Service Co., Cedar Rapids, Ia.; Lee Joynes Co., Walla Walla, Wash.; Carl W. Moegling, Pomeroy, Wash.; The Big Bend Motors Co., Ritzville, Wash.; J. Schuff, Castle Rock Garage, Castle Rock, Wash.; United Motors Co., Seattle, Wash.; Echo Motor Car Co., Tonawanda, N. Y.; Bounds Motor Co., Weldon, N. C.; R. G. Edgerton & Co., Norfolk, Va.; F. H. Campbell, Zanesville, Ohio; City Garage, Inc., Rockwood, Tenn.; Earl Horner, Dayton, Wash.; Chipman Limited, New York City; G. Menchaca & Co., Lima, Peru; Montval & Co., Valparaiso, Chile; W. H. Waples, Lynden, Wash.; Homer Sly Auto Co., Petoskey, Mich.; Fox & Wiggins, Wolverine, Mich.; John & Millard, Hersey, Mich.; A. J. March Motor Truck Co., Milwaukee, Wis.; W. H. Aspinall & Co., Weston, W. Va.; Dr. G. W. Otto, c/o Reo Motor Sales Co., Wheeling, W. Va.; Mobile Auto Co., Mobile, Ala.; Elias Brong, Billings, Mont.; City Garage, Inc., Tupelo, Miss.; Leach-Frawley Motor Co., San Francisco, Cal.; Duplex Truck Sales Agency, Denver, Colo.; Consolidated Grocery Co., Jacksonville, Fla.; Sutcliffe Reo Auto Co., Waterloo, Iowa; Don Sales Co., Rock Island, Ill.; Wichita Auto Co., Wichita, Kan.; Greenlaw Truck & Tractor Co., New Orleans, La.; The Linscott Motor Co., Boston, Mass.; Love & Todd, Flushing, Mich.; Ravada Sales Co., Reno, Nev.; Welfare Auto Co., Wilson, N. C.; A. H. Jones, Hastings, Neb.; Reo Motor Sales Co., Canton, Ohio; West Side Motor Co., Hamilton, Ohio; Stapleton Motor Sales Co., Oklahoma City, Okla.; Northwest Auto Co., Inc., Portland, Ore.; Harrisburg Auto Co., Harrisburg, Pa.; B. L. P. Motor Co., Philadelphia, Pa.; W. Penn. Duplex Truck Co., Pittsburgh, Pa.; Grady Motor Co., Salt Lake City, Utah; Myers Reo Motor Co., Lynchburg, Va.; Duplex Wisconsin Co., Milwaukee, Wis.; Frawley Motor Car Co., Dallas, Tex.; A. A. Tillman & Co., Hancock, Mich.; J. W. Wetzel, Ackermanville, Pa.; G. Q. Dorr, Saginaw, Mich.; Bark River Bridge & Culvert Co., Wisconsin; C. R. Richardson, New York City; Chas. A. Riggle, Goshen, Ind.; R. A. Livezey, Hollywood, W. Va.; Duplex Sales Co., Hot Springs, Ark.; H. T. Bailey, Roswell, N. Mexico; Duplex-Knoxville Truck Co., Knoxville, Tenn.; McKiernan Bros., Pomeroy, Wash.; L. A. Porter, Lewistown, Idaho; K. T. McKinstry, Atlanta, Ga.; Alpha Christly, Baker, Ore.; Taft Transfer Co., Hood River, Ore.; J. F. Dopplmaier, St. Helens, Ore.; Pendleton Auto Co., Pendleton, Ore.; North Carolina Sales Co., Raleigh, N. C.; Cairo Auto Sales Co., Cairo, Ill.; Murphy Machinery & Equipment Co., St. Louis, Mo.; Duplex Sales Agency, Lansing, Mich.; Dinsmoor & Co., St. Marys, W. Va.; Howell Motor Co., Baltimore, Md.; Consolidated Grocery Co., Pensacola, Fla.; W. Z. David, Miami, Fla.; Purdy Motor Co., Tulsa, Okla.; Stewart Motor Sales Co., Reading, Pa.; Capitol Motor Car Co., Columbus, Ohio; R. P. Taber, Inc., Hartford, Conn.; G. A. Lewis, Mankato, Minn.; Sears Auto Co., Des Moines, Iowa; Heath Auto Co., Sioux City, Iowa; Murphy Mach. & Equipment Co., Memphis, Tenn.; Franklin Motor Co., Richmond, Va.; Reo Motor Sales Co., Parkersburg, W. Va.; Spooner-Campbell Co., Gouverneur, N. Y.; Fawkes Auto Co., Minneapolis, Minn.; McChesney & Montgomery, Lewistown, Mont.; Security Motor Co., Kansas City, Mo.; Jos. Naw & Co., Winnipeg, Manitoba; United Garage Co., Toledo, Ohio; Garden City Garage, Missoula, Mont.; Duplex Truck Sales Co., Nashville, Tenn.; Mitchell Automobile Co. (Farmer Boy tractor), Milwaukee; Wilson Tractor Co., Peoria, Ill.

# Automotive Equipment

## STOKES CARBURETER FOR FORDS

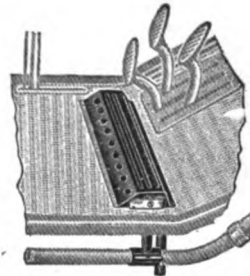
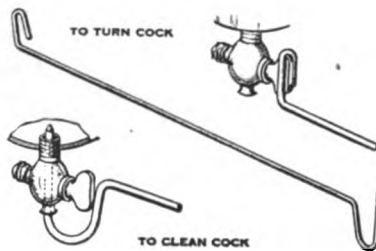
This is a puddle-type carbureter for Fords. It has a low speed throttle which is kept almost closed for speeds up to 20 m.p.h., when it is opened up to obtain higher speeds. The carbureter is designed for fuel economy and all the fittings will fit the existing Ford connections. The mixing bowl is of sheet brass fitting ground joints and forced against them by a thumb screw on the bottom. This thumb screw allows easy access to the float mechanism. The carbureter is designed to use low-grade fuels. Price \$15.—Stokes Carbureter Co., 781-783 East 142d Street, New York City.



A reservoir on the top holds the supply of oil and the entire device is attached to the spring and held there by a coil spring on the bottom which is snapped over a hook. No machine work, bolts or nuts enter into the application of the device. Made in sizes to fit all passenger car and truck springs. Price 50 cents for car sizes, 75 cents for truck sizes.—Gordon G. Atwell, Nacogdoches, Tex.

## OIL AND RADIATOR COCK WRENCH FOR FORDS

This is a wrench to turn the oil and radiator cocks on the Ford, the other end having a tip to clean out the holes in the cocks if they are obstructed. Price 15 cents.—Gray-Heath Co., 1440 Michigan Avenue, Chicago.



## SANITARY CAR HEATER FOR FORDS

A car heater which utilizes the heat of the exhaust to heat a radiator in either the front or the rear of Fords. It is installed by cutting a hole in the exhaust pipe and clamping the connection over the hole, the hot gas passing up through the pipes of the radiator and then down another pipe to the air. A regulator allows the degree of heat to be regulated or shut off entirely. Price \$3.—Gray-Heath Co., 1440 Michigan Avenue, Chicago.

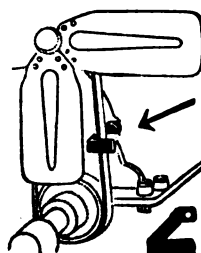
## TUNGSTEN DISPLAY CABINET

This is a display cabinet for Tungsten spark plugs. It is finished in circassian walnut with an attractive stick-up on the top. It is furnished free to dealers with any order for 100 plugs.—Tungsten Mfg. Co., Marshalltown, Iowa.



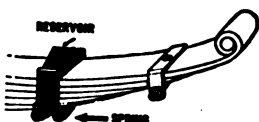
## HOME FAN-BELT HOLDER FOR FORDS

This is a small bracket that is bolted to the front of the Ford crankcase under one of the crankcase bolts. The end is bent over at right angles so that the fan belt which goes inside cannot slip off the lower fan pulley. Price 10 cents.—Gray-Heath Co., 1440 Michigan Avenue, Chicago.



## VAN SPRING OILER

This is an oil-retaining device to keep spring leaves lubricated.

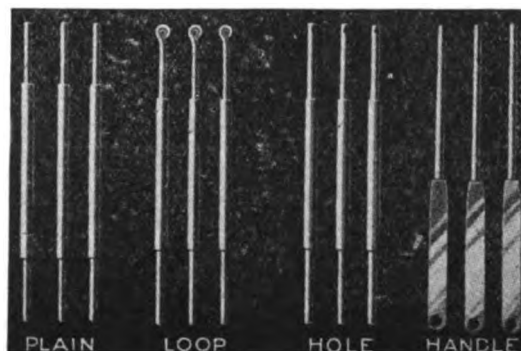


## BULLER AUTOMATIC COUPLER

This is an automatic coupler for coupling tractors with plows, farm implements or trailers. The coupler consists of two movable jaws pivoted in a bar so that the pin of the drawn implement can be pushed between these jaws, the jaws then closing on the pin and holding it there until released by the operator raising the locking block. Made in 12 different styles to suit different styles of drawbars, prices ranging from \$6 to \$15.—Buller Coupler Co., Hillsboro, Kan.

## FORTNEY MEASURING WIRES

These are standard measuring wires for testing gages. They are made accurate to within .00005 in. and are perfectly round, straight and hard. They are made plain, loop, hole and handle style. Made in a variety of sizes, prices ranging from \$7 to \$11.—Fortney Mfg. Co., 13-15 Franklin Street, Newark, N. J.



## *Solving Service Problem by* **Employing Women Mechanics**

*St. Louis Service Station Manager Says They Are Quick to Learn and Perform Their Duties as Efficiently as Men*

**T**HE nearest approach to a solution of the automobile service problem yet found lies in the employment of women as mechanics, according to E. P. Musler, manager of the service department of the De Luxe Automobile Co., Oldsmobile distributor of St. Louis.

This conclusion on the part of Mr. Musler was expressed after several weeks of experimenting with women workers. He began with 12 women who answered his advertisement for women more than 30 years of age and more than 140 lb. in weight. When he expressed the opinion that women were at least a partial solution he was employing three of the original dozen. These three had proved good workers and one of them has the mechanical instinct and skill to the "Nth degree," as Mr. Musler expressed it.

The experiment is being conducted in the assembly warehouse. Here are some of the things that the women do better than men, according to Mr. Musler:

Oiling and filling grease cups. The women are thorough, miss no oil place and do the work more neatly.

Assembling cars. The women's fingers appear to be more adaptable than those of men, and they put on fenders more quickly and with less damage to the parts than men.

The car, when ready to take out, is

neater and cleaner for the women's touches here and there.

In reassembling jobs where parts must be washed with gasoline their work is superior in quality and speed (doubtless due to housekeeping experience and instinct).

The women work faster and better in the small corners of the machine.

"President Brockman and myself had discussed the employment of women in the service department for some time before we undertook it," said Mr. Musler, "and we had very serious doubts. Finally we advertised and employed 12 women of safe age and of a size that appeared to give the strength for the work we planned.

"The fact that we have now only three of the original 12 on the payroll is not discouraging to me. There were some others that I would like to have kept. They had the spirit and the ability, but as I understood it there were home reasons why they quit. I did not inquire into the details.

"But three out of 12 is not worse than we are experiencing in the employment of the men applicants of today.

"The average of the women who showed a grasp of mechanical details was about equal to that of men. Of course there were some who did not get the idea at all. This is true of men and is not surprising.

"I anticipate that once the women have settled to the job there will be less waste in the turnover than with men. I have assured the women now on our payroll that they need not look elsewhere for better paying jobs, as I am paying them equal to the men who do the same class of work, and will advance their pay as rapidly as they grasp the work. They appear to be content.

"I am not asking them to do heavy lifting and will not tolerate that. We will keep enough men at least to do the lifting that is not done by derricks or lifting machines.

"The women have so far done everything that is asked of them. We have used them in jobs that required change of motors and frames. They can take a machine apart and put it together again. They keep the parts in good order and keep them clean.

"Of course we have not considered employing 'chickens,' as we want only earnest women who know the serious side of life and are ambitious to earn as much as possible for the time they are employed.

"We have not yet put any women at work in the public service station where customers come and go. We anticipate too much curiosity and fear a loss of time from outsiders and the younger mechanics. But in the assembly shop and where the big work is taken we regard them as entirely successful."

## **Giving Your Movie Slides the Proper Atmosphere**

(Continued from page 20)

chological element working again. But after the feature drama has been shown it is a jolt to come back into the realm of reality with an ordinary matter of fact slide. Of course you can't help dealing in facts, but these need not be served up in a dull and uninteresting fashion. The picture which tells a story appeals to the imagination, so give motion picture patrons what they are in the mood for.

It is psychology which prompts the modern photoplay exhibitor to send his patrons home with a smile. It does not matter whether the comedy is of the slapstick kind or whether it is the polite parlor kind. At the end of either kind of comedy one's smiles and chuckles will be restored to their normal condition. One of the first things the automobile dealer and repairer is taught about slide

advertising is to use the humorous slide. We all have our ideas of what constitutes humor, but the automobile dealer and repairer is on safe ground if he uses some of the humorous slides put out by the slide manufacturers and national advertisers. These are prepared especially to appeal to the universal sense of humor as distinct from that of the sectional brand. Take your cue from the photoplay producers. They figure that horseplay appeals to all senses of humor. You don't, of course, have to resort to horseplay, but the humorous slides on the market are prepared to appeal to all degrees of intelligence.

If it may appear necessary to run all of the four slides at each performance, let me assure you that you can still show your lone slide. The first week arrange with the exhibitor to show a news slide

after the animated weekly. The second week have the educational slide shown after the educational reel. The third week have the serious slide follow the feature drama. The fourth week have the comedy conclude with the humorous slide. Thereafter you can alternate with your slides. This method of presentation will at first score a hit by its novelty, but after a little while the fans will be unconsciously impressed and will look for such slides after each picture instead of during the intermission. The exhibitor will probably confine the method of presentation to one advertiser at a time, charging more for the special service.

So the automobile dealer and repairer must be the first retailer in his neighborhood to secure this exclusive privilege.

# Demonstrating the Farm Lighting Plant

IT is highly desirable that the dealer be able to take a demonstration plant around with him when he calls on farmer prospects to sell farm light and power plants. A number of ways of doing this have been used, but a novel and effective scheme is used by some of the Delco-Light dealers.

The plant is carried on the rear deck of a roadster and is protected from dust and rain by a glass case which allows the plant to be easily seen, and when the plant is demonstrated the glass cover hinges back so as to be out of the way, yet it is but the matter of a minute to

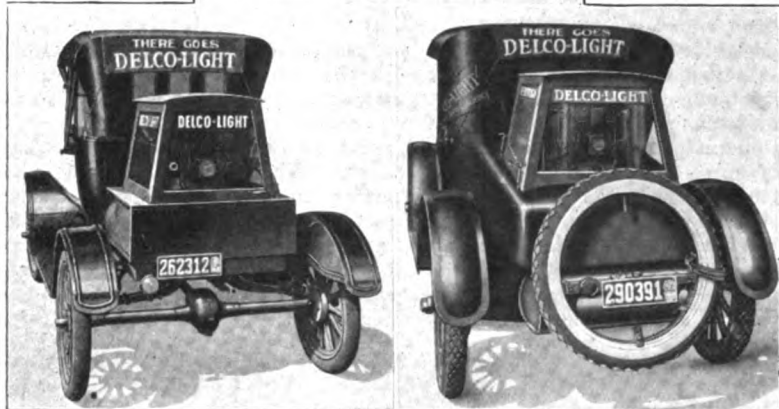
either throw it back or replace it. The Western Mfg. Co., Toledo, Ohio, is making some of these demonstrator covers and standard covers to fit the rear decks of Fords, Buicks and Dodges, which can be had for \$25.50 f.o.b. factory.

The cover or glass hood has been built especially for the purpose. The lower part of the hood consists of a wooden box, which is of sufficient size to permit the rubber jar demonstrating batteries being mounted along side the plant.

The upper part of the hood is constructed of glass panels, and this part of the hood is fastened to the box by

hinges. When the boot of the roadster has been removed, this hood can then be fastened to the rear of the car. The

Show Cases for Farm Light Plants. The upper is a Dodge, left a Ford and right a Buick



One of the cases opened so that the plant can be demonstrated

glass makes the plant visible at all times and with the metal roof makes the outfit weather and dustproof.

The name of the plant may be placed on the glass on both sides of the cover and on the rear, and lights can be used at night to make the name stand out clearly.

There seems to be no reason why this idea could not be applied to plants which are carried around on trailers. In such case the glass will increase the advertising value of the device and other equipment may also be carried on the trailer.

## Disapproves Bidding for Old Trucks to Get New Sales

*St. Louis Commercial Car Bureau Also Expresses Its Disfavor of the "Woodshed Artists" Who Fail to Provide Proper Housing Facilities for Their Trucks*

ST. LOUIS, Sept. 30—The present is an excellent time to break off the bad habit of bidding for used trucks to get the sale of new ones, according to the opinion of the members of the Commercial Car and Service Bureau, which discussed this question at its regular weekly meeting. The members failed to agree that the meaning of the government sale pledge was that no used trucks could be traded in, but the members did support the sentiment quoted and several made it plain that they would not trade in any truck except for junk.

The members also expressed a strong sentiment as to housing cars of the "woodshed artists," as those truck owners were termed who kept their vehicles in any sort of a shed during the warm weather and then rented storage space when freezing weather came. It was their opinion that winter charges should be higher than to all year storage customers.

The plan for establishing the St. Louis-Alton Express Service was passed for the time because of the condition of the road. The question as to disposition of

brewery trucks after Dec. 1 was mentioned and it was the general opinion that a good many of these would be put into transportation service. There are 19 breweries here and the largest of them has a truck fleet of 125 units. It is probable that this brewery will be turned into a munitions factory before Dec. 1, which would employ this transportation. This week's meeting was cancelled because most of the truck men have enlisted for a part in the Liberty Bond sales campaign, which is being put over with a great big wallop.





*Avery Company's motor cultivator*

“THE motor cultivator and a tractor have displaced 9 horses for me. I am doing my farm work with 3 horses where I used to have 12, and I am doing it easier and better.” So says Ole Oleson, a prominent farmer near Sycamore, Ill.

“The tractor and motor cultivator cut down the horses and increased the acreage per man. They can be run 24 hours a day in a rush season and do not eat when not in use. If I did not have my motor cultivator I should have to keep 3 more horses and have no use for them only to cultivate corn. The price grain is now it is a big expense to keep extra horses.” Confirmatory evidence comes from J. H. Warne, a Dekalb County, Ill., farmer who raises from 175 to 225 acres of corn and who keeps only 6 horses.

If any more evidence is needed as to the effect the motor cultivator has on the horse population of the average farm it might be furnished by farmers like Ralph Painter, Stronghurst, Ill., who has done away with 3 of his horses since he bought a motor cultivator.

These typical instances of combined tractor and motor cultivator efficiency have great significance for the automotive dealer. They point the way he must go in his effort to motorize the farm.

It means most decisively that what the tractor itself has hitherto failed to do the motor cultivator is destined to accomplish, namely, make most of the horses at present on the farm a useless encumbrance.

The motor cultivator removes the last objection the corn belt farmer can have to investing his money in motor-driven equipment. Also it opens up trade possibilities for the automotive dealer which will rival in magnitude and importance those presented by the tractor.

In short, the motor cultivator is bound to become one of the most popular and most generally used of motor-driven implements for the modern farm, and in it the automotive dealer has a wonderful opportunity to extend his usefulness and trade.

The impossibility of cultivating corn and other row crops by means of the ordinary farm tractor has limited its usefulness and the demand for it. This has been one of the main reasons why the corn belt farmer could not figure out how a tractor could be a profitable investment for him. As long as it was necessary to keep his horses for the cultivation of corn he could not see why he should not continue to use them for plowing and for the other necessary work on the corn belt farm of average size.

It appeared to him that unless the tractor could displace a sufficient number of horses to save an equivalent amount of investment in horse flesh, or to save enough in operative cost by cutting down the cost of horse feed, he could not own one. He thought he could not afford to own both horses and tractor, and as long as the former were necessary anyway he resisted the temptation to buy the latter.

Six horses is standard equipment for

# Merchandising Motorize

*That the Use of the Motor Cultivator  
Farm Vital Argument in Selling*

a farm of 160 acres. This number of horses is considered to be absolutely essential for planting, cultivating and such other light power jobs as haying and hauling, where it either is impossible or impracticable to use a tractor profitably for such tasks.

It follows that only in exceptional cases where a farmer works 160 acres or less can he use a tractor profitably, for the reason that he cannot find enough heavy drawbar work and belt work to employ a tractor the requisite 50 or more days to make it pay. At least this has been the result of tractor experience up to the present time.

On larger farms, of course, and in cases where the farmer has been enabled by means of his tractor to increase the number of acres he works, some horses have been displaced, but even in these cases not to the extent desired nor expected.

It is undoubtedly true that a tractor in the long run will justify itself even on the 160-acre farm, whether it displaces any horses or not, but the farmer is much inclined to estimate tractor worth to him in terms of horse displacement. When horses are displaced the saving in investment and maintenance cost is obvious and tangible. The farmer can see and figure it.

But the other advantages, advantages which in the long run are the most permanent and important, are more dis-



*Motor cultivator manufactured by the Emerson-Brantingham Implement Co.*

# Possibilities he Cultivator

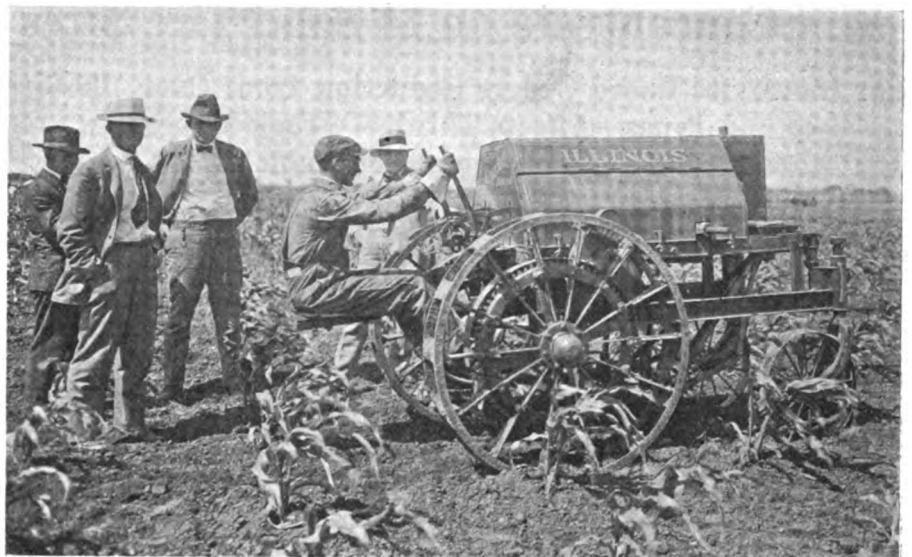
*s Eliminating the Horse from the  
he Machine to the Farmer*

tant and more or less indirect. They are not so readily seen and it is more difficult to convince the farmer in advance that they will appear. For this reason they have not the same convincing force, either as a selling argument or as a justification for tractor ownership, that the displacement of horses has.

The tractor dealer must understand and allow for this typical farmer attitude, and he should know how it affects his tractor sales prospects, and he should have arguments at his command to offset it whenever it appears.

This is made easy when the automotive dealer sells the motor cultivator in connection with the tractor. The motor cultivator puts the dealer into a position to answer every possible objection the farmer can advance. It also puts him in a position to show the farmer conclusively that by using a motor cultivator in connection with a tractor he actually will displace his horses and do those things by motor which hitherto were possible only with horses.

The motor cultivator is a practical and practicable realization of the hope of the farmer that he might be able at some time to motorize his farm and dispense with practically all of his horses. This never will come about in fact, of course, until the farmer can be induced to add the motor truck to his tractor and motor cultivator, but the motor cultivator will



*Type of motor cultivator made by the Illinois Silo Co.*

go very much farther toward complete motorization of the farm than the tractor ever has gone or ever will go.

Now the motor cultivator supplements the tractor, and how markedly it contributes to the motorization of the farm, both by doing what it is impossible for the ordinary tractor to do and by being utilized for other of the light power tasks about the farm which hitherto were of necessity entrusted to the horses, the illustrations herewith and the letters which follow will indicate.

The automotive dealer should consider the motor cultivator seriously in the light of what it already has accomplished and in view of what it undoubtedly is destined to accomplish in the future. It is a coming machine. It will be used by the thousands. Already there are a number of them on the market and still others are being developed and will be announced in the near future.

It plants and cultivates corn and other row crops faster and better than those

tasks can be done with horse equipment. It is being used economically and efficiently in the hay field. It is being utilized for light power belt work. It is taking over all the tasks for which horses have been retained on the tractor-equipped farm with the exception of road hauling and corn husking. It presents trade possibilities which the automotive dealer cannot afford to ignore.

"I find it much easier to handle than horse-drawn cultivators," says Ole Oleson. "My 16-year-old boy has handled it for two seasons, and it does a half more work in a day than it is possible to do with a 2-row horse cultivator. On my farm it already has displaced 3 horses and 1 man, and it has been used only for cultivating and harrowing. Fitted with a drawbar it could be used on all kinds of farm machinery within its power range. I have used mine successfully to operate a 10-in. feed grinder. I consider it a thoroughly dependable machine. It costs a farmer too much to own a motor truck, but if I had one with the tractor and the motor cultivator I now own my farm would be completely motorized."

"My motor cultivator will not plant, but it cultivates all right," says Ralph Painter. "If only it would plant I should have no use for horses at all. My 14-year-old boy runs it. It is just the thing in hot weather and in cultivating you have more time to watch the rows. It has displaced 3 horses for me. I have used mine also for grinding feed."

As will be noted by the illustrations, at least one of the models now on the market will plant four rows of corn at once and will cultivate corn afterward.

"I have had a motor cultivator for the last two seasons," says J. H. Warne, "and it has given extra good satisfaction. I would rather run the motor than horses, as a person can keep going all day, hot or cold. I raise from 175 to 225 acres of corn and keep only 6 horses. I have a tractor for heavy work and do not have more than 6 horses except in

(Continued on page 45)



*Motor cultivator produced by the International Harvester Co.*

# Will Concentrate on 14 Solid Tire Sizes

## War Industries Board Orders Reduction from Over 100 Sizes and Types—Affects Third of Truck Makers but Only on 1 to 2-Ton Vehicles

WASHINGTON, Sept. 30—Sizes of solid tires will be reduced from a range of more than 100 types and sizes to 14 types and sizes within the next 2 years. An immediate reduction to 40 sizes has been ordered and this will be lowered to 36 on Nov. 1. Following that date there will be a gradual elimination of other types and sizes at specific periods until the minimum number is attained. The use of caustic soda in tire manufacture is to be discontinued at once.

The effect of the reduction within the next two years of solid tire sizes from more than one hundred to fourteen will not by any means be serious. Approximately one-third the total number of truck manufacturers will be affected, but only insofar as their smaller models are concerned.

Analysis of the sizes to be eliminated and those to be continued reveals that 114 separate models of trucks produced by various manufacturers will be affected. Of these models 28 are 1 ton, 36 are 1½ ton and 27 are 2 ton, which is a total of 91, leaving only 23 other models of capacities varying from ¾ to 6 tons which are affected. Practically all manufacturers producing vehicles larger than 2 tons already have adopted tire sizes which fit in with the standardized sizes to be adopted.

These plans are the result of a series of conferences between representatives of the industry and the War Industries Board, held to standardize the sizes and types of solid tires, to reduce the amount of labor, material and capital used. Following is the standardized program:

*Class A*, which is the range of standardized sizes and types which will be continued, includes hard base pressed-on and all removable types of tires of the following sizes:

32 x 3	36 x 4	40 x 5
32 x 3½	36 x 5	40 x 6
32 x 4	36 x 6	40 x 10
	36 x 7	40 x 12
	36 x 7	40 x 12
	36 x 8	40 x 14
	36 x 10	

*Class B*, which is the range which will be discontinued no later than Nov. 1, 1920, includes hard base pressed-on and all removable types of tires of the following sizes:

30 x 3½	34 x 3	36 x 3½	40 x 7
	34 x 3½		
	34 x 4		
	34 x 5		

*Class C*, which is the range to be discontinued in manufacture no later than Nov. 1, 1919 includes hard base pressed-on and all removable types of tires:

32 x 3½	34 x 6	36 x 3	38 x 4
			38 x 5
			38 x 6
			38 x 6

*Class D*, the range which will be discontinued on Nov. 1, 1918, includes hard base pressed-on and all removable types of tires:

42 x 5	
42 x 6	
34 x 3½	38 x 4½

*Class E*, which will be discontinued at once includes all types and sizes of solid tires not specified in the above classes.

### Continue Tire Production at 50 Per Cent

NEW YORK, Oct. 1—Production of pneumatic tires during October, November and December is to be continued at the same rate as during August and September namely 50 per cent of normal production. During this period tire manufacturers will be allotted only one-third of their normal quantity of rubber. This means that they must use up all surplus stocks. Those who are close to the situation state that such surplus stocks are ample to permit this fifty per cent production of tires. The War Industries Board, which has made these rulings, hereafter will consider the rubber industry as a controlled industry. Restriction of pneumatic tire production applies only to casings and tubes smaller than 6 in. section. There will be no restriction of 6 in. or larger tires. No restriction will at present be placed on the production of solid tires.

### Milwaukee Gets Motor Transport School

MILWAUKEE, Sept. 30—Milwaukee has been selected as the seat of a government Motor Transport training school through the combined efforts of the Milwaukee County Council of Defense, the Milwaukee Automobile Dealers, Inc., the Milwaukee Association of Commerce, and other organizations which have urged that the wide extent of the motor industry of the city entitled it to recognition in this direction.

A contract was signed Sept. 28 with the War Department by the board of directors of the Association of Commerce by which the big State Fair Park at West Allis, a suburb of Milwaukee, will be turned into an immense motor school, accommodating 1000 soldiers at one time. The Milwaukee association assumes the financial obligation of housing and feeding the soldiers and making necessary alterations and additions to buildings, for which there is to be an equitable reimbursement by the government.

Motor Hall, the big fireproof building used by the Milwaukee dealers for their annual fall shows on the fair grounds, together with several other large exposition structures on the grounds, will be used to house the men. The first course will open Nov. 1, with 1000 men, and the period of training will be 30 days. On

the first of each succeeding month, this number of soldiers will arrive to enter the school. A large refectory will be erected immediately to fill the need for mess facilities. Otherwise the present establishment will serve all purposes. The Milwaukee association will spend approximately \$100,000 a month to feed and supply the men. The camp will be strictly military in nature, and the only civilian employees will be the cooks, who are employed by the Association of Commerce.

There are at present fourteen concerns in Milwaukee which manufacture motors for passenger and commercial cars, aircraft, tractors and similar purposes. Each of these will contribute much to ward the practical training of the soldiers. The fair grounds contain a 1-mile circular track and a ½-mile track, in addition to which there are from 500 to 600 acres of ground for other phases of the training course.

### License All Air-Filling Stations

JOLIET, ILL., Sept. 30—Air is no longer free in Joliet. All of the garages have installed nickel-in-the-slot machines and patrons must drop a coin in the receptacle before they can secure the release of the air hose to inflate tires. The City Council has decided to charge each garage \$5 per annum license for each air-filling station. The garage owners will be able to show a small revenue from the air service even with the license charge. The City Council at first demurred to the issuance of permits to all persons asking for them. It was argued by some of the aldermen that five air stations were ample, the stations proving an undesirable obstruction to pedestrians and blocking the sidewalks. It was finally voted, however, that all applicants would be accommodated and no restrictions will be made.

### War Work Expanding Factories

DETROIT, Sept. 30—Due to the steady increase in the volume of war work in Detroit and surrounding territory, many automobile and allied concerns find it necessary to erect new buildings and additions to increase their facilities for supplying the growing war requirements. An unusually large number of building permits for factory buildings and additions have been issued during the past few weeks.

The Packard Motor Car Co. is planning a one-story oil reclaiming station to be erected at the plant on East Grand Boulevard and the Michigan Central Railroad.

Dodge Brothers are contemplating a \$300,000 addition to the new building which was recently erected on Lynch Road to accommodate war work.

The Hudson Motor Car Co. has plans on foot for an additional plant building, 60 x 460, to cost in the neighborhood of \$60,000. It is reported, but without confirmation, that the building will be used for shell manufacture.

The Paige-Detroit Motor Car Co. will erect a one-story generator house building at the plant located on McKinstry Avenue.

The Swedish Crucible Steel Co. is building a one-story addition to its factory at Butler Avenue and the Grand Trunk Railroad.

The Parish Mfg., manufacturer of automobile frames, will erect a two-story addition to its factory on Mt. Elliott Avenue, between Harper and Milwaukee Avenues.

### Chicago Plans "Over the Top"

CHICAGO, Sept. 30—The motor industry in Chicago will go over the top with its Liberty Loan quota early in the campaign, if the first day's results are an indication. The Chicago Automobile Trade Association on Saturday, the first day of the drive, secured subscriptions amounting to \$200,000 from 98 concerns in the trade. A preliminary expense fund of \$150,000 has been placed at the disposal of the Liberty Loan committee. In the last loan, the motor industry in Chicago exceeded its quota of \$1,800,000, and the present quota is approximately twice that amount.

### N. A. D. A. Adds 175 More

ST. LOUIS, Sept. 30—Slightly more than 175 membership applications were received at the N. A. D. A. offices this week. Harry Haynes, who did good work in the Northwest, is in Indiana and held his first meeting in Terre Haute. He held a meeting there and signed each dealer present who was not a member. The rest of the applications came from individuals in many parts of the country.

A. L. Oliger of Emporia, Kan., who has been identified with N. A. D. A. promotion work, has started a campaign in that section.

In answer to a recent letter sent out from headquarters, the secretary of the Cumberland, Maryland, Association wrote: "We have got every dealer in this county as a member and cannot send any more until new dealers open." Assistant Secretary Holke says that a number of districts have made similar reports.

### Possible Relief for Truck Makers

WASHINGTON, Oct. 1—Some idea of the relief some truck manufacturers may expect from the action of the War Industries Board restricting production during the last half of this year to one-third of the number of vehicles produced during the last 18 months is given by decisions of Charles C. Hanch, chief of the Automotive Products Section, early this week. It is understood that two manufacturers already have had their apportionments increased, both by practically 50 per cent. Hanch is given latitude by the War Industries Board to increase or decrease apportionments. It is understood that he will decide individual cases and that a number of truck manufacturers at present have appeals pending.

## Dealers Can Get War Contract with an "If"

### If They Have Facilities for Doing Work They May Look Up Sub-regional Adviser and Find Out

WASHINGTON, D. C., Oct. 1—Dealers who have facilities for doing war work may secure war work, according to an official announcement. The big "if" in the whole proceedings is that dealers will be given war work according to their facilities for manufacturing or assembling, and the facilities of many dealers are mostly bare floor space. Wherefore the "if." However, if any dealer has any facilities as described he may apply for war contracts.

The announcement is made by C. A. Otis, chairman of the Committee on Resources and Conversion, War Industries Board, who states that dealers may be able to effect progress in this direction by combining their organizations.

As was announced some time ago, this committee was organized with 20 industrial zones, each in charge of a regional adviser, and sub-zones in charge of sub-regional advisers.

Dealers who wish to investigate this work are requested to write to Chairman Otis who will put the dealers in touch with the sub-regional adviser, who will give the dealers all the necessary information.

### Philadelphia Discusses Return Loads

PHILADELPHIA, Sept. 28—Discussion of the return-loads plan was the feature of the first fall dinner and business meeting of the Motor Truck Association of Philadelphia held at the Hotel Adelphia. More than 100 members were present. Secretary W. H. Metcalf, in outlining the methods of the return-loads bureau conducted under the supervision of the Chamber of Commerce, mentioned that there were, in round numbers, 400 motor trucks registered with the Chamber's bureau of transportation.

### Milwaukee Lends Cars for Liberty Loan

MILWAUKEE, Sept. 30—Milwaukee motor car dealers are making an important contribution to the success of the city's Fourth Liberty Loan campaign by placing a fleet of passenger cars and trucks at the disposal of the committee. Announcement of the contribution was made in a full-page display advertisement published in the Milwaukee Sunday newspapers over the signatures of thirty-one dealers. The advertisement said in part:

It is time for all car owners to realize how far motor transportation is already serving the nation and how it can do still more. In Milwaukee 30,000 motor cars carry upwards of 100,000 persons more than 10 miles a day—to their work and back, and on other business errands. A million passenger-miles daily; six million a week, 312,000,000 a year!

Add that to the record of every other business and industrial community and it repre-

sents a definite factor in transportation. It also means a savings of at least half an hour's time per individual—50,000 hours a day; 300,000 a week; 15,600,000 a year—1,560,000 working days of ten hours each.

Again consider that this only one city—and less than one hundred and fiftieth part of America's motor cars. Even if you cut that moderate estimate of time-saving in half does it not give you a new conception of the service that motor transportation can—and very generally does—render the nation?

Milwaukee's fleet of motor transports mustered together will serve the workers of the Fourth Liberty Loan. \* \* \* Milwaukee dealers gladly contribute their cars to this great cause. It is only a cheerfully given service, dedicated to the success of the one mighty purpose to which every ounce of true American energy has been bent—namely, WIN THE WAR."

In addition, the motor car industry, as Group 1 of the Milwaukee district, is making the most vigorous and energetic campaign to make a large over-subscription of its quota on the Fourth Liberty Loan. The group consists of motor car dealers, garages, motor liveries, accessory and supply dealers, and manufacturers and dealers in tires, rubber goods, etc. Royal H. Case, of the Osmond Motor Car Co., 503-507 Broadway, is group chairman. Vice-chairmen are Frank J. Edwards, Kissel-Kar Co. and Edwards Motor Car Co., and Roland F. Coerper, Western Motor Supply Co.

### Half-Million the First Day in Philadelphia

PHILADELPHIA, Sept. 28—The Philadelphia Automobile Trade Association has half a million dollars' start of the opening of the Fourth Liberty Loan drive to-day. Approximately that amount was subscribed before last night by the various trade groups and individual concerns in the trade and aligned with it for the campaign. The total allotment for the association and its Allies in the drive is \$2,600,000.

The big advance subscriptions follow:

Autocar Co. ....	\$200,000
Automobile Sales Corporation.....	100,000
Pennsylvania Company .....	50,000
Overland-Harper Co. ....	25,000
Fanning-Mathis Co. ....	25,000
Electric Tachometer Corporation and Employees .....	12,200
H. B. Harper.....	10,000

As in the previous loan campaign for the organization, W. B. McCullough is chairman of the body known officially as "Group No. 3, Industrial Committee." More trades are included in the groups in the present drive than in any previous.

### More Automotive Dealers

ST. LOUIS, Sept. 30—More St. Louis motor car firms are getting ready. The Mound City Buggy and Auto Co. announces that it has taken the distribution of the Turner Simplicity farm tractor.

The Briscoe Motor Sales Co. last week demonstrated the Sandusky farm tractor at the St. Louis County fair.

The Welling Motor Car Co. is selling Detroit Weatherproof tops.

The Hudson-Phillips Motor Car Co. announces that when the manufacture of Hudson cars stops, the local company will continue its service and used car departments.



## Glover Heads Motors Division of Q. M. Corps

### New Branch Procures Vehicles for Motor Transport Corps— The Organization

WASHINGTON, Sept. 26—Organization of the Motors Division of the Quartermaster Corps, which has charge of procurement of motor-propelled vehicles, has been completed. This division procures the motorized vehicles for the Motor Transport Corps, which has charge of maintenance, operation and engineering.

Col. F. Glover of the Quartermaster Corps, formerly general manager of the Emerson-Brantingham Agricultural Implement Manufacturers, Rockford, Ill., is the chief of the Motors Division. Maj. Guy Hutchinson, formerly an automobile dealer in New York City, is the Executive Officer. Col. E. S. George is the assistant chief of the Division. Maj. A. H. Zacharias, who several years ago was connected with the Pressed Steel Company, is the production assistant. Maj. C. S. Dahlquist, formerly of the Timken-Detroit Axle Co., is the technical assistant.

The division comprises three branches—procurement, administrative and district offices. The procurement branch is organized in sections as given below:

Captain Finkenstadt, named in the table, was formerly assistant to Christian Girl, president of the Standard Parts Co., assistant to Mr. Girl when he was in charge of Army truck production, and later was in charge of B truck production, following Mr. Girl's resignation. By this new organization he has been made assistant to Maj. A. B. Browne. Mr. Morgan was formerly connected with the Mitchell Motor Co., and was president of the Abbott Co. Mr. Tracy was formerly with the Premier and the Paige motor companies. Mr. Morrison was connected with the Highland Body Co. Mr. Hess was formerly with the Cleveland Motorcycle Co. All the men named here, together with their connections, were formerly with the Motor Transport Service under Christian Girl.

The administrative branch is under Capt. S. B. Dean, and includes: Office control, under Capt. A. D. Stansell; personnel, W. A. Dickey; clearances, D. G. Blair; finance and statistics, A. G. Drefs; trucks, Capt. H. M. Lowy.

The district offices organization includes: The Chicago office, under Maj. M. B. Edgerton; Cleveland, under Capt.

D. S. Devore; New York, under Maj. E. L. Jaco, and Detroit, under Maj. G. D. Wilcox.

### Conduct School for Mechanics

ROCK ISLAND, ILL., Sept. 30—In order to secure better results the Tri-City Automobile Trade Association and the Young Men's Christian Association will co-operate in conducting a school for motor mechanics. A ten weeks' course will be given, starting Oct. 17 and with classes every Monday and Thursday evening. The course will be open to men over 16 years of age. Not only are young men invited who wish to perfect themselves in motor repair work for service in the army, but also car owners, thus relieving the shortage of mechanics is so pronounced. The Young Men's Christian Association is in touch with young men who might wish to take advantage of the motor car instruction and the decision to co-operate will doubtless greatly increase the number of students.

### Ball Bearings on Preferred List

WASHINGTON, Sept. 30—The manufacture of ball bearings and steel balls has been recognized as an essential industry by the War Industries Board. Any member of the industry whose plant is now or in the future shall be exclusively devoted to manufacturing products being or to be absorbed directly or entirely by the government, or in other uses of essential importance, may have their plants given a Class B-3 rating for steel and iron requirements. This rating is given upon the condition that the usual pledge of co-operation be signed and that the rules of the Priorities Division be followed. Manufacturers whose entire output does not go for government use, may file applications for places on the preference list.

### Will Distribute Wisconsin Tractor

MILWAUKEE, Sept. 28—The Wisconsin Farm Tractor Sales Co. has been organized by O. F. Brewer, formerly of Madison, Wis., to act as exclusive distributor of the Wisconsin farm tractor in all states east of the Mississippi River, excepting Wisconsin. Brewer is widely known in the motor car and truck field. He retired recently from the Brewer-Mosel Co., Madison, distributor of the Maxwell and Wisconsin farm tractor. The new company has established headquarters at 123 West Madison Street, Chicago, in charge of Brewer. The Wisconsin tractor is manufactured by the Wisconsin Farm Tractor Co., Sauk City, Wis.

## Great Little Rumor Killer Is the N. A. D. A.

### President Vesper Is Busy Answering All Sorts of Questions— Service for Dealers

ST. LOUIS, Sept. 30—Persons who are inclined to view the N. A. D. A. as merely a war emergency organization should have a look into some of the correspondence that passes through the president's office here. This would convince any doubter that there is a large field for such an organization, war or peace.

Within a week letters have come from Maine asking for the best lien law in the country and from Washington asking for an anti-theft law. This inquiry for a good type of laws that involve the motor business is a wide one.

The president's office also has become a clearing house for the pro-German style of rumors that affect the industry. A man from Omaha has read two exactly opposite reports as to the gasoline situation in home papers and he asks the truth. A western New Yorker was talking to a banker and the man of money asked him if it was true that an order was to be issued that no more motor cars were to be made and after 3 months the unofficial use of cars would not be permitted. The dealer wrote to the N. A. D. A. for an authoritative answer.

Another dealer asks if it is a general practice to advance the price of parts above list, such as "adding 10 per cent for freight and other expenses that the dealer formerly absorbed."

Perhaps the various announcements by the Automobile Chamber of Commerce and the Fuel Administration, or if not the announcements the version of them that gets into the newspapers, cause more inquiries than any other feature. Within the past 2 months there have been numerous letters asking advice as to how to organize local associations.

Now all of these questions are answered, for President Vesper believes that just such service as this is due to the members. He gives them the benefit of his experience in Washington, his knowledge of the War Industries organization and his business experience. If it is a question on which he is not informed, he draws on the experience of other public spirited motor car men, or even men outside the trade.

### Packard Shops Hire Women

WILMINGTON, DEL., Sept. 28—The employment of women in its repairshop is being considered by the Packard agency. The company already has a young woman in its plant. She is employed in the store room, likes the work and shows an aptitude for the job. Manager Bixby says that if the drain on the man power in the repair line continues he will have to take on half a dozen women. This, however, is following in the wake of the Philadelphia branch of the Packard Co., which already has quite a force of women at work.

### Organization of the Motors Division of Quartermaster Corps

Section	Officer in Charge	Assistants
A and B trucks.....	Maj. A. H. Browne	Capt. E. R. Finkenstadt
Military trucks.....	Capt. A. C. Keleher	A. D. Bolton
AA trucks, ambulances, automobiles.....	Maj. W. T. Fishleigh	Capt. W. G. Stoner
Special vehicles, motorcycles, bicycles.....	Maj. R. Miller, Jr.	
Spare parts, accessories, tires.....	Guy Morgan	Capt. C. O. Miller
Trailers.....	P. W. Tracy	E. S. Church
Bodies.....	James Morrison	R. W. Irwin
Orders.....	Lt. W. J. Kennedy	Lt. T. A. Clarke
Priorities.....	D. F. Hess	Lt. L. J. Bulkley
Gauges.....	Capt. E. P. Hanglitter	

## Importance of Trucks to Nation's Welfare

### Highways Transportation May Be Salvation of Country—Farms for Returned Soldiers

WASHINGTON, Sept. 28—Complete understanding of the scope of the Highways Transport Committee and of their own particular functions was brought home to the Regional Chairmen of the Committee as a result of the 3-day conference held here this week. The conference terminated Thursday, September 19.

Roy D. Chapin told the Regional Chairmen that the object of his committee was to provide more transportation to carry the nation's war burden. He outlined the great organization which his committee has created within the last 9 months to help move military supplies, speed up all kinds of war work, increase food production, relieve railroads of short-haul traffic and generally spare the man power of the country. The country, he said, has been distracted by the committee on the basis of its highways centers and the eleven regional chairmen and 15,000 committeemen are greatly relied upon as an important force in the expansion of the Government's war program.

Europe is burning the candle of present and future resources at both ends, said Herbert Hoover in his address, and for 10 years after peace comes the productivity of the United States will be called upon to aid the Allies and the millions of people exploited by Germany. He told in detail how the world is never more than 60 days ahead of famine between harvests and predicted great starvation areas in Europe. He urged every activity that will increase food production. "One of the results of a perfected highways use," he said, "would be to cut down the waste of perishable foods. Fifty per cent of our perishables never reach the consumer. We lose from 40 per cent to 60 per cent of our potatoes yearly. Not only is the producing area of our perishables congested, but in general the producers are too remote from the markets.

Secretary of the Interior Lane pictured to the committee a nation of small farming communities on new land open or reclaimed by the Federal government and cultivated largely by America's veterans of the great war, these centers all united by rural expresses operating over the highway.

He stated that the Government intends to furnish farming opportunities for the men who return from the front and that the work of the Highways Transport Committee will be invaluable in developing these farming communities.

Senator George E. Chamberlain addressed the conference on the development of Rural Expresses, Return Loads Bureaus and Store Door Delivery as connected with the military program.

Joseph D. Baker of the Priorities



Division of the War Industries Board discussed the feasibility of federal license of motor car and truck drivers to conserve fuel, steel, lubricants and manpower employed in service stations. It will be recalled that earlier issues of Motor World predicted a probable federal license plan of this sort operated by the Priorities Division. It has been rumored for some time.

At the close of the conference the visiting Regional Chairmen presented Mr. Chapin with a loving cup.

Regional Chairmen present, together with the territory they control, included J. Randolph Coolidge, Jr. (Region No. 1), Massachusetts, Maine, Vermont and Rhode Island; George H. Pride (Region No. 2), New York and Connecticut; C. A. Musselman, (Region No. 3), Pennsylvania, New Jersey, Delaware, Maryland and Virginia; Tom Winn (Region No. 4), Tennessee, North Carolina, South Carolina, Georgia, Alabama, Mississippi and Florida; Harry L. Gordon (Region No. 5), Michigan, Indiana, Ohio, Kentucky and West Virginia; John T. Stockton (Region No. 6), Illinois, Wisconsin, Iowa, Missouri, Kansas and Nebraska; Earl Browne (Region No. 7), Minnesota, North Dakota, South Dakota and Montana; J. F. Witt (Region No. 8), Texas, Oklahoma, Arkansas and Louisiana; Tom Botterill (Region No. 9), Colorado, Utah, Wyoming and New Mexico; Julius L. Meier (Region No. 10), Oregon, Washington and Idaho; L. A. Nares (Region No. 11), California, Nevada and Arizona.

### West Heads Wheel Makers

CLEVELAND, Sept. 30—The next meeting of the Automotive Wheel Manufacturers Association will be held here Oct. 10. At the last meeting of the association, the following officers were elected: President, R. H. West, West Steel Casting Co., vice-president, R. B. Flower, Standard Steel Casting Co.; treasurer, W. E. Burns, Michigan Malleable Iron Co.; secretary, George L. Lavery, West Steel Casting Co.; executive committee, H. A. Coffin, Detroit Pressed Steel Co.; R. D. Webster, Wire Wheel Corp. of America; George Walthers, Dayton Steel Foundry Co.

## Return Loads Bureau Started in Milwaukee

### Six Concerns Now Moving Inter- urban Freight—One Route Covers Total of 90 Miles

MILWAUKEE, Sept. 30—A Return Loads Bureau, founded along original and permanent lines, has been established as a division of the Milwaukee County Council of Defense, with the co-operation of the traffic departments of the Milwaukee Association of Commerce, the Chamber of Commerce, and other organizations interested in the matter of relieving the congestion of railroad transportation and at the same time promote the use of motor trucks for interurban freight traffic. The new bureau has been placed in charge of R. J. Willetts, secretary of the department of commerce and finance of the defense council.

At present there are six concerns engaged in interurban freight traffic with headquarters in Milwaukee. The newest of these is the Motor Dispatch, Inc., which is hauling freight between Milwaukee and Chicago, a distance of about 90 miles. This is the longest route adopted thus far. Other lines operate between Milwaukee and Waukesha, 18 miles; Milwaukee and Oconomowoc, 32 miles; Milwaukee and Grafton, 25 miles; Milwaukee and Port Washington, 29.5 miles, and Milwaukee and Racine, 26 miles. It is confidently expected that this number of lines will be more than doubled within a short time because of the increasing demands upon existing lines. Traffic shows large growth almost every day, the Return Loads Bureau having appointed committees in various industries to work on the traffic problem and determine to what extent motor truck lines can be used to advantage.

The rates charged by existing carriers range from 5 to 7 cents plus the regular classified freight rate on the commodity. In the case of the Milwaukee-Chicago line, a flat rate of 80 cents per 100 lb. is standard.

### May Continue Gasless Sundays

WASHINGTON, Sept. 28—The gasolineless Sundays will continue indefinitely, but may be lifted at any time, according to statements made yesterday by Dr. H. A. Garfield, United States Fuel Administrator. Dr. Garfield told that it was not possible yet to learn how much gasoline conservation had been effected by the gasolineless Sundays, but that as soon as definite figures are available to show that the continuance is unnecessary the plea will be recalled.

### West Gets Oneida Truck

NEW YORK, Sept. 28—The West Motor Co. has been appointed Eastern United States and export representative for the Oneida Motor Truck Co. The company will cover 19 Eastern states.

## Colorado Demonstration Draws 2000

### Run by Farmers for Farmers with 20 Makes on Hand—Weld County a Promising Market for Cultivation

DENVER, Sept. 26—A tractor demonstration originated by farmers, run by farmers and for farmers and witnessed by about 2000 farmers was the feature of the Weld County Fair at Greeley last week.

Twenty makes of tractors took part, and all demonstrations and tests were of a strictly practical nature and especially intended to show the value of tractor farming under conditions of soil and other essential factors prevailing in Weld County. The general demonstration covered 3 days, but the official test was confined to one afternoon.

Every tractor, large or small, was given a chance. The committee in charge of the event believed that freak tests would not benefit any of the farmers wanting to see exactly what tractors can do in plowing, disk, harrowing, seeding or other farm work, and also took the position that subjecting a small tractor to some unreasonable test for its class might cripple the machine and do a serious injustice to the entire tractor industry.

Although this demonstration was at first planned on a somewhat small scale, it went far beyond expectations in every respect and proved to be the largest event of its kind ever held in Colorado. So great was its success that leaders in Weld County affairs hope to make a tractor demonstration an annual event, and count upon it to be a powerful factor in building the Weld County Fair into one of the really large and important fairs of the entire region, and agricultural resources and opportunities in Weld County justify such hope and ambition.

#### Plow Depth 6 to 8 In.

In the plowing test the official depth required was not more than 8 in. and not less than 6 in. The tractor representatives were required to line up and draw by lot for position on field, and all makes were given ample ground to demonstrate the several uses desired. A field manager was on the grounds at all times to decide any disputes, and no motor cars or trucks were allowed anywhere on the demonstration field of about 200 acres.

The land was largely irrigated, which gives a hard soil to plow and made the demonstration the more valuable according to the depths plowed. There was also a variety of short oats stubble, heavy wheat stubble and heavy weeds.

Every tractor gave an excellent performance, and every dealer taking part in the event is highly optimistic over prospects of resulting sales. A large per cent of the crowd were considered prospective purchasers, and the interest shown by the farmers was all any dealer could ask.

The farmers were there to study comparative tests in an effort to decide ex-

actly the best methods to improve their farming efficiency by using tractors, and exactly what machines would best suit their respective farms for size of fields and other conditions. The event was entirely educational, and the dealers worked enthusiastically and in harmony to answer all questions and give as full and accurate information as possible.

Two to five plows were used by different tractors, and some makes had more than one model on the field. All the demonstrators laid special emphasis upon the ease with which one man can operate a tractor and a gang of plows. This fact was used for its full worth because of the shortage of man-power caused by war demands, and the idea went home with the farmers.

#### The Management

The entire event was supervised by Weld County Agricultural Agent Mason E. Knapp, who served as executive secretary. The executive committee consisted of J. M. Collins, president of the State Farmers' Union; George Hodgson and C. W. Henry, all farmers. The field manager was D. C. Straight, also a farmer.

The exhibit test was held on the farm of David Kelly, three miles from Greeley and about a mile from the fair grounds. The fact that 2000 persons went out that far to witness the exhibit was taken as evidence of interest based on something more substantial than curiosity.

The tractors and exhibitors were as follows: Avery, Avery Machinery Co., Denver; Case, E. W. Johnson, Greeley and Case branch, Denver; Cleveland, H. B. Ellis, Denver; Eagle, C. H. Parker & Son, Denver; Fordson, Universal Motor Co., Greeley, and Denver branch; Fitch four-drive, George W. Smith, Denver; Gray, William Seighman, Denver; G. M. C. Sampson, Weld County Garage, Greeley, and Norton-Buick Auto Co., Denver; Heider, Eagle Motor Co., Greeley; Huber, Soper Implement Co., Greeley; International, G. E. Benson, Loveland, and International Harvester Co. branch, Denver; Hart-Parr, E. C. Scott, Denver; Lawson, Soper Implement Co., Greeley, and Colorado-Lawson Co., Denver; National, Herman Toogood, Denver; Wallis, Soper Implement Co., Greeley, and Colorado Tractor Sales Co., Denver; Wisconsin, Farm Tractor & Machinery Co., Longmont; Waterloo Boy, Farmers' Supply & Machinery Co., Greeley; Yuba, Frank P. Smith, Denver; Deere, John Deere Plow Co., Denver; Rumley, C. W. Cline, Greeley, and Kansas City Rumley branch.

There was no set program provided in connection with the demonstrations, but all the dealers were merely left free to instruct groups of visitors in whatever way they saw fit.

Weld County's importance as a tractor market is suggested by the following facts from official records: In assessed valuation, Weld County stands next to Denver in the entire State, its present valuation being \$84,010,750. The population is 55,000 and the area is 4022 square miles. The bank deposits were \$6,704,375 in 1916 and \$10,023,067 in 1917.

One-eighth of the entire cultivated land in Colorado is in Weld County, which has more than 550,000 acres under cultivation. Weld has more dairying, stock-raising and feeders than any other county in the State, and raises more vegetables and grain than any other two counties.

#### Weld County's Wealth

In 1917 Weld County produced 300,000,000 lb. of potatoes, 40,000,000 lb. of cabbage, 30,000,000 lb. of beans, 131,000,000,000 lb. of grain, 620,022 tons of sugar beets, 45,000 tons of alfalfa, 60,000 tons of onions and showed \$60,000,000 invested in cattle and sheep.

Weld County is also fast becoming motorized. The 1917 motor car registration was 5494, a gain of 2170 over the 1916 total of 3324, while a substantial gain for this year is indicated by returns thus far. An extra high proportion of the farmers own passenger cars, and many are purchasing trucks and installing motor machinery for farm work.

Thousands of acres of unfenced dry land have been developed during the past few years, but there are still thousands of acres more to be developed by the use of tractor machinery. This land is said to be ideal for tractor cultivation, and the greatest need now is declared to be efficient tractor operators capable of handling all classes of machinery required for tractor cultivating and seeding on a large scale.

#### Co-operation a Big Help

Enterprising and public spirited business men outside of tractor and implement dealers co-operated toward making Weld County's first tractor exhibit the big success it turned out to be, and the same men are counted upon to help develop efficient tractor farming throughout this county of vast wealth and immense territory of undeveloped agricultural opportunities. These business men want Weld County farmers to buy tractors to raise more food for America's soldiers, and make more money to buy more Liberty Bonds, and also to make and to buy more land to demand more tractors to produce more food, and so on.

#### Vesper on M. T. Committee

ST. LOUIS, Sept. 30—President F. W. A. Vesper of the N. A. D. A. has been appointed a member of the Motor Transport Advisory Committee of the Y. M. C. A. War Work Council. His office here already has received quite a number of applications from mechanics anxious to enter the work of the Y. M. C. A. abroad.

## Mechanics Needed for American Air Service

**Jobs Are Waiting for Repairmen, and Some Officers Are Needed**  
—Where to Join

WASHINGTON, Sept. 30—The Air Service has been reopened for induction of mechanics and of candidates seeking commissions as pilots, armorers, observers and balloonists, irrespective of status in the draft.

Candidates are sought for this service, which has been closed for the past six months, because of its rapid and huge growth. Twenty-nine flying fields have been completed in this country. More than 1200 De Havilland planes, 6000 Liberty engines, parts for the first heavy night bombers, 6600 training planes and 12,500 training engines have been completed and necessitate the increase of both the commissioned and enlisted personnel in order to maintain full strength in this country and continue the necessary flow overseas.

There is fast movement overseas of air squadrons, planes, engines and material for American aerodromes, fields and assembly plants in France and England, according to a statement issued here today by the War Department.

The Air Service is to-day 160 times what it was at the outbreak of the war. On April 6, 1917, it numbered 1110 enlisted men, regardless of cadets in training and officers as compared to 147,434 enlisted men on August 1, 1918. Civilians have not been allowed to qualify as pilots since March 1918.

During last fall and the early winter 6600 prospective flyers, accepted by the examining boards, had been built up and have since been gradually drawn upon as the Service grew. In addition many of the enlisted men have been allowed to train for commissions.

Applicants may apply at the Aviation Examining boards. The age limits for flyers are 18 to 30 years inclusive with preference to those under 25 and for balloonists from 18 to 45. The examining boards are located at:

Atlanta, Georgia School of Technology; Boston, 739 Boylston Street; Chicago, 230 East Ohio Street; Dallas, Camp Dick; Fort Sill, Okla., Post Field; Los Angeles, Marsh-Strong Building; Minneapolis, University of Minnesota; New York, 104 Broad Street; San Antonio, Fort Sam Houston; San Francisco, 55 New Montgomery Street; St. Louis, 525 South Euclid Avenue; Washington, Building D, Floor 1, Wing 2; Canal Zone, Camp Sherman.

The call for mechanics opens the service to men anxious not only for active field work but also for the service for which their training best fits them. Skilled men only are wanted. Those accepted will be sent to a concentration depot, trade tested, given special intensive training in airplane mechanics and then organized into airplane crews and squadrons, some for duty here, others for duty overseas, with good opportunity for advancement, since four-fifths of the men

are promoted above the grade of private. Classes especially desired include:

Airplane mechanics, cabinet makers, chauffeurs, electricians, motorcyclists, motor mechanics, instrument repairmen, propeller makers, machinists, clerks.

Applicants as mechanics will be accepted between the years 18 and 55 inclusive. They can receive further details from the Department Air Service officers in the six departmental headquarters at Boston, New York, Chicago, San Francisco, San Antonio and Charleston, S. C.



### *They're Exempt*

WASHINGTON, Sept. 28—Concerns engaged in the transportation of necessary commodities, within cities and along public highways, can claim deferred classification for their necessary employees, according to a ruling made here by the Provost Marshal General of the War Department. This means that a motor truck transportation company hauling merchandise or commodities essential to the maintenance of the military establishment, or the effective operation of the army, or the maintenance of national interest during the emergency, can claim deferred classification in the draft for their employees.

### **Propose Gasoline Cards**

WASHINGTON, Sept. 27—Recommendation for a card system to be used for gasoline distribution "during the gasoline shortage" was made in Congress yesterday by Congressman Focht. The recommendation was the result of a letter from a constituent, a farmer, who pointed out what he considered the injustice of the Sunday gasolineless program. The farmer, he said, working in his field on week days, witnessing the cars driving by, able only to use his on Sundays, considers it an injustice to be prohibited from the use of passenger cars on Sunday while others with more leisure might use theirs during the week.

## Newark Association Links With National

**Revises Schedule of Dues to Include Membership in N.A.D.A.—  
No Action on Show**

NEWARK, N. J., Sept. 30—At a special meeting of the New Jersey Automobile Trade Association it was unanimously voted to adopt a proposed amendment to the constitution and by-laws, whereby the dues for members who are eligible for membership in the National Automobile Dealers' Association would be made \$40 per annum, and the dues for all members not eligible would be \$25 per annum.

The increase in dues will not become operative until the beginning of the next fiscal year, July 1, 1919.

Meanwhile the board of trustees has made arrangements for making every eligible member of the association a member of the National.

No action was taken with regard to the matter of holding an automotive show during the coming winter. The vote was unanimous to defer taking action at this time, either for or against a show, with the understanding that if war or business conditions should change between the present time and the usual time for holding the Newark show, further action would then ensue.

J. W. Mason reported that cannel coal could be obtained at the present time from Littlefield Bros. of this city, and that it was recommended for the use of heating plants. A strong recommendation was made that dealers and garagemen who have not as yet laid in their stock of coal take immediate action lest they be unable to get any later. Some members reported that they would lay in a stock of both coal and coke to meet their needs this winter.

A traffic committee was appointed to take up with the city authorities the question of providing some public parking space in the vicinity of the Four Corners, the same as is done in other large cities. The use of shrill exhaust whistles on vehicles was condemned as being unnecessary and apt to cause reflections on all car owners.

It was again strongly urged upon all members that they make their Liberty Loan subscriptions through the Automobile Trades Committee, of which W. H. Ellis is chairman. Craft pride makes it essential that every dollar contributed by a member of the trade, or his employees, be reported through his own committee.

### **Des Moines Abandons Shows**

DES MOINES, Sept. 28—Des Moines will have no more motor car shows until after the war is won. Directors of the Des Moines Automobile Dealers' Association held a special meeting this week and decided to follow up the action of the officials of the national shows in doing away with shows during the period of the war.



# To Market New Kerosene Carbureter

## Can Be Used on Any Engine Without Changes—Gives Same Mileage as Gasoline Without Carbon or Smoke

NEW YORK, Sept. 30—A kerosene carbureting device which operates on a new principle, and which enables any internal combustion engine designed for gasoline to generate without any change whatever the same power on kerosene as on gasoline, without smoke, carbon deposit or dilution of the crankcase oil has been perfected and is being placed on the market.

The device is the invention of Enoch Rector and is to be manufactured and marketed by the Rector Kerosene Carbureter Co. which is already producing in a limited way and is at present negotiating for the production of the device in large quantities. James F. Allen, of J. F. Allen & Co., 111 Broadway, New York, a firm of bankers, is head of the company; associated with him are: Vice-president, E. J. Ludington, president of the Chase Bag Co., St. Louis; secretary and treasurer, Stephen N. Bond; George Wilson, manager of the Union Bank of Canada; Archibald R. Watson, and other bankers.

### Long Under Development

The device has been under development for more than a year and in that time has been extensively tested in the laboratory of Joseph Tracy both for those interested in the company and the United States government, the latter tests having been made in Tracy's capacity as Consulting Engineer to the Bureau of Oil Conservation. A long series of road tests have also been made, including the operation of a 5-ton Garford truck for 6 months with the device. The Fifth Avenue Coach Co., which operates the buses on Fifth Avenue, New York, has been experimenting with one of the devices and during the past 3 weeks has operated one of its vehicles in regular passenger-carrying work.

According to the tests which were made by Tracy, the Rector carbureter gives practically the same mileage on kerosene as can be obtained on gasoline. In laboratory tests, the same maximum horsepower is obtainable and the curve shows a considerable increase in horsepower at all speeds below maximum. Analyses of the crankcase oil after both high-speed and low-speed runs, show no measureable dilution of the oil. Smoke is completely eliminated, and, in the case of the 6 months run of the Garford truck, there was only sufficient carbon deposit to warrant it being wiped off the pistons with a cloth; the valves were in excellent condition.

According to the tests which have been made, the flexibility operating on kerosene is indistinguishable from that obtained with gasoline.

In the conduct of the various tests, it is worthy of note that heavy vehicles carrying their rated capacities have always been used. No experiments have been carried on with light vehicles, the

thought being that if the device would operate properly and efficiently with a heavy vehicle it would work equally as well with a light vehicle where the demands are not so severe.

Although the use of a heavy vehicle might presuppose almost a continuous capacity load on the engine with little variation of speed and few stops, the reverse has been the case. The device in use on a Fifth Avenue bus, for example—it is fitted to a Knight engine—is subjected to wide demands regarding speed variations with frequent stops of varying length. That the carbureter has equalled expectations for this work is evidenced by the fact that the Fifth Avenue Bus Co. is desirous of equipping all its fleet with Rectors. The fuel consumption measured in dollars and cents is about one-third that with gasoline.

Following are extracts from the report made by Joseph Tracy in his capacity as Consulting Engineer to the Bureau of Oil Conservation. The tests were made on a 10-ton Garford tractor chassis having a four-cylinder 5.1 x 5.5 engine equipped with Bosch magneto. The vehicle with load weighed 15,275 lb.:

On gasoline the "motor stalled at 9.05 a. m. at 42d Street and 10th Avenue; started immediately. Stopped 9.56 a. m. to telephone and started again at 10.06 a. m. Arrived at Yonkers on first trip 10.25 a. m.; arrived at 42d Street at the end of first trip at 11.30 a. m. Turned and resumed run without stopping. Stopped for traffic at 42d Street and Tenth Avenue one-half minute. Arrived in Yonkers on second trip at 12.34 p. m. Stopped at 12.44 for three minutes for drink. Finished second run at 42d Street at 1.43 p. m. Odometer reading at this point 2723.

"Before beginning third trip, one-half gallon of medium Polarine oil was poured into the motor crankcase. Started third trip from 42d Street at 2.15 p. m., odometer reading 2723 miles. Arrived Yonkers 3.18 p. m.; arrived at 42d Street at 4.20 p. m. Started on last trip at 4.23; arrived Yonkers at 5.23 p. m.; finished 6.27 p. m. at 42d Street, odometer reading 2779 miles.

"Summary of results:

"Weather: fine and clear.

"Temperature: average 73 degrees Fahr. Barometer, average 30.16 in.

"Condition of road surface during test: dry and in good repair.

"Total distance traveled: 113 miles.

"Elapsed time: 9 hrs., 23 min., 30 sec.

"Actual running time: 8 hr., 35 min.

"Speed, m.p.h.: 13.1.

"Quantity of gasoline in tank at start: 25.375 gal.

"Taken from tank at finish: 3.375 gal.

"Used in test: 22 gal.

"Miles per gallon: 5.1.

"Ton miles per gallon: 39.19."

Immediately following the tests with gasoline, the same route was covered the same number of times with kerosene using the Rector carbureter. Following are the results:

"Weather: fine and clear.

"Temperature: average, 78 degrees Fahr.; barometer: average, 30.04 in.

"Condition of road surface during test: dry and in good repair.

"Total distance traveled: 113 miles.

"Elapsed time: 11 hr., 12 min.

"Actual running time, 9 hr., 11 min.

"Speed, m.p.h.: 12.3.

"Quantity of kerosene in tank at start: 25.375 gal.

"Quantity of kerosene taken from tank at finish: 4.25 gal.

"Used in test: 21.125 gal.

"Miles per gallon: 5.3.

"Ton miles per gallon: 39.19."

The present development of the carbureter has only gone as far as kerosene. However, it would seem that other fuels might well be used, such for example as distillate, certain grades of fuel oil and certain crudes not having an asphalt base.

### Government Rents Ford Buildings

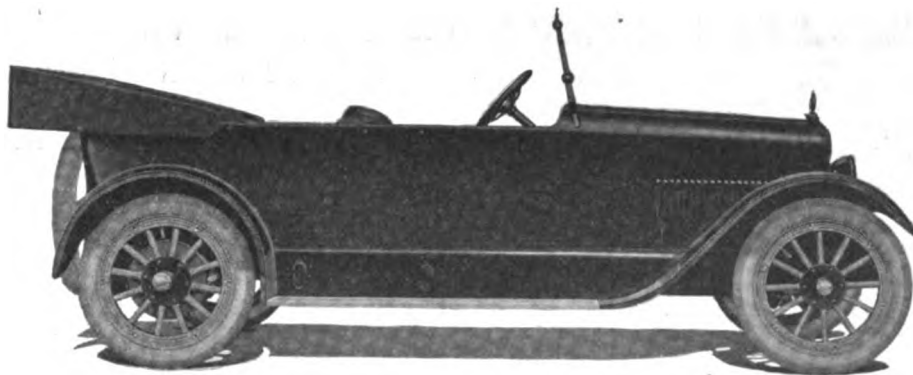
WASHINGTON, Sept. 30 — Seven buildings used by the Ford Motor Co., for distributing, assembling and service stations, have been taken over by the Government. The buildings are located in St. Louis, Atlanta, Long Island City, Cambridge, Mass. Louisville, San Francisco and Philadelphia. The St. Louis building, which has 215,000 sq. ft. of floor space will rent to the Government at 31½ cents per sq. ft., and will be used by the Depot Quartermaster. The Atlanta building, totaling 161,000 sq. ft. at a rental of 26 cents per sq. ft., will be used by the Reclamation Department of the Quartermaster Corps. The Long Island City building, 477,000 sq. ft., rental 31 cents per sq. ft., will be used by the Gas Defense Service. The Depot Quartermaster is using the Cambridge building which has 160,000 sq. ft. at 32 cents per sq. ft. The Louisville plant of 83,000 sq. ft. is being used as a Medical Supply Depot at 24 cents per sq. ft. The Division of Military Aeronautics will take over the San Francisco building of 38,000 sq. ft. at 24 cents per sq. ft. The Ordnance Department and the Depot Quartermaster divide the Philadelphia Ford building for the monthly rental of \$1,420 per floor.

### Asks Increased Production of Kerosene

WASHINGTON, Sept. 30—Oil refineries throughout the country have been requested to increase kerosene production to the fullest extent to forestall a possible shortage during the coming winter, by M. L. Requa, Director of the Oil Division of the United States Fuel Administration. Kerosene consumption is increasing, stated Requa, and unless immediate steps are taken to increase the supply we will face a shortage this winter, more acute than any experienced with other petroleum products.

### Philadelphia to "Drive Those Rivets"

PHILADELPHIA, Sept. 27—At the monthly meeting of the Automobile Accessory Business Association twenty-eight members and guests were present. Seven applications for membership were presented and the wartime slogan, "Drive Those Rivets," was adopted. Speakers were A. E. Maltby, president of the Automobile Trade Association and George Fritz, traveling secretary of the National Association of Automobile Accessory Jobbers.



## Elgin Makes Several Improvements

### Larger Engine with Pressure Lubrication Adopted—Maintenance Simplified and Comfort Increased

**A**LARGER engine and numerous detailed refinements throughout the chassis, as well as later body lines, mark the new product of the Elgin Motor Car Corp., Chicago, which is to be known as the Elgin Six, series of '19. Deliveries are to start in October, but production, of course, will be limited under present Government regulations.

The only bodies are a touring model at \$1,395, a four-passenger sport Military Scout, which appeared this summer on the older chassis, and the convertible sedan.

Increased power is provided by  $\frac{1}{8}$  inch larger bore, making the cylinders  $3\frac{1}{8}$  by  $4\frac{1}{4}$ . The same overhead-valve, block-case six design, is used, having removable cylinder heads, with thermosyphon water circulation through a V-shaped radiator. In the valve construction, quietness has been enhanced by a slight change in the shape of the valve-lifters; the fan adjustment has been made more convenient. The motor of the two-unit Wagner electric system has been raised above the center line of the fly-wheel, increasing its accessibility and protecting it from mud and dirt. The generator coupling is steel instead of a leather disk, in order to increase its durability.

Lubrication is now pressure to all main bearings, combined with circulating splash, and a new oil-supply gage with a dial indicator is fitted where it can be more readily seen. An oil-pressure gage is mounted on the dash.

The steering arrangement has been improved by using a straight tie-rod, instead of a bent one, and it is larger. This gives more stability, and keeps the front wheels in line. Larger pivot pins in both ends of the rod give longer wear without lost motion. Steering has been made easier by an increased gear reduction and the addition of bronze bushings on the shaft.

Greater roominess and comfort are provided, first, by the increase in wheel-base, which is now 118 in. and increased length and width of the front springs, which eliminate the choppy action in going over bumps. This also is enhanced

by increasing the size of the spring clips. The rear springs are set up closer to the frame, reducing the twisting of frame side-members to prevent sidesway of the car and eliminate body and fender squeaks.

Deeper and more comfortable seats have been provided. A foot-rest, permitting of an even pressure on the accelerator, makes for driving comfort, and more room for moving from one side of the front seat to the other is given by placing the control levers farther forward and slanting them back.

#### Ease of Maintenance Increased

One of the chief improvements in the car is the increased ease of maintenance. This is seen in the new location of the starting motor, new fan adjustment and new oil-supply gage. In addition, the oil filler has been made more accessible, the Willard storage battery has been placed under the front seat instead of under the floorboard, where it is easier to get at, and locating brackets and return springs, which prevent brake-bands from dragging, are other maintenance improvements. Most appreciated of all the changes made for the sake of maintenance will be the use of oil cups instead of grease cups on all spring bolts.

The general lines of the body have been improved, beginning with the increased height of the radiator, which adds not only to the appearance of the car, but to the cooling capacity; the body sides are higher, with straight, level lines, instead of the double-curve effect of the past season; the quality and construction of the body are said to be better, as well as the trimming and finish, and the leg room in the front seat is increased. The lines of the top have been improved, giving a long, flat effect.

A baked enamel radiator shell has been made possible by using a detachable shelf instead of having it integral with the core. The front fender aprons are brought out to the front end of the springs, which not only adds to the appearance, but protects the radiator and lamps from splash. The hood louvers or vents have been made longer to give

increased air circulation, and are vertical, instead of slanting. The fuel tank and tire carrier at the rear have been altered in appearance and construction.

The tire carrier is stronger, and the tail-lamp and the license plate holder are more rigid. A new type of door bumper prevents rattle, the rear curtain carries beveled plate glass windows, instead of celluloid, and the side-curtains have been changed from the cable type to separate adjustable type, so that any curtains may be used separately when desired. The speedometer, which always has been driven from the gearset, now takes its power through worm gears, enclosed in the rear end of the case, constantly running in grease and consequently noiseless.

Toe boards covered with heavy aluminum strip replace the rubber mat. A Yale type lock and key individual for each car is fitted to the ignition switch.

#### Illinois Highway Transport

**CHICAGO, Sept. 28**—Possibility of an embargo by the railroads on all less than carload shipments of freight within a radius of 100 miles of Chicago this winter is indicated in a letter sent out by the Chicago Association of Commerce to its members with the questionnaire designed to determine to what extent motor transport lines and the return loads system can be utilized by the shippers of Chicago. The association has been requested by the State Council of Defense to assist in developing a system of highways and trolley transport within the territory tributary to Chicago, and makes the point that the moving of all possible freight over the highways by motor trucks and on trolley lines is a wartime need and a patriotic duty.

Whether or not the suggested embargo by the railroads goes into effect, the State Council of Defense expects to be in a position to handle all l.c.l. shipments within a radius of 100 miles of the city, according to the letter of the Association of Commerce. The important thing necessary at this time is co-operation by the shippers.

#### 4929 Trucks In Ontario

**TORONTO, Sept. 21**—That the motor traffic in this province is rapidly growing and that commercial trucks are forming a considerable portion of this increase is indicated in the report of the Department of Public Highways for 1917.

Motor vehicle registrations in 1917 consisted of 78,861 passenger cars and 4929 commercial vehicles, a total of 83,790. This is nearly twice the registration of 1915. There is now in Ontario one car for each 39 of population; the average in the United States is one for each twenty of population. It is true in Canada, as it is also true in the States, that agricultural communities, rather than manufacturing, contain the greater number of cars in proportion to population. In Saskatchewan the registration is one car to each twelve of population. In Ontario 23,408 cars are owned by farmers, an increase of 11,335 in 1917.

## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

Albert W. Hussel, formerly president of the Russel Motor Axle Co. and treasurer of the Russel Wheel & Foundry Co. of Detroit, has been appointed a member of the War Credits Board by the Acting Secretary of War, Benedict Crowell, to fill a vacancy caused by the resignation of F. P. Neal.

J. H. Gould, formerly of the J. H. Gould Co., Detroit, has been appointed chief engineer of the Buffalo Pressed Steel Co.

George A. Robson, formerly assistant advertising manager of the Chalmers Motor Co., Detroit, is now connected with the service staff of the Detroit Saturday Night Press.

J. E. Grady, sales manager of the Studebaker Corp. of Canada, Ltd., and manager of the Detroit branch, has resigned to become associated with R. T. Hodgkins, vice-president and general manager of the Cleveland Tractor Co., Cleveland.

Jay E. Chilson has been appointed representative for Chicago for the L. H. Gilmer Co., Philadelphia.

H. F. Harris has been appointed general sales manager of the Republic Motor Truck Co., Alma, Mich.

Charles G. Percival, captain, Ordnance Department and post ordnance officer, is editor of *The Bomb*, which is published at American Military Camp 704, A. E. F.

John C. Toomey has been appointed district manager of L. A. Young Industries, Inc., Detroit.

Graham W. Brogan has been appointed advertising manager of the Duesenberg Motors Corp., Elizabeth, N. J. He was formerly assistant to the general sales manager.

S. A. Wright has left his position as sales manager with the U. S. Tire Co. of Cincinnati to accept a place in charge of the Y. M. C. A. work at Fort Thomas, Kentucky, whence he expects soon to go overseas. Mr. Wright has in consequence resigned his place as vice-president of the Cincinnati Automotive Trades Association. E. N. Stearn, acting manager of the C. & D. Auto Supply Co., is his successor.

E. H. Beltz, office manager for the Firestone branch in St. Louis, has taken a similar position with the Federal Truck Co. of that city.

J. L. Hibbard has been appointed foreign sales manager for the Cleveland Tractor Co., Cleveland. For the past five years he has been in charge of foreign sales for the Studebaker Corp.

John E. Garlent, who has been in charge of motor car production of the Harroun Motors Corp., Wayne, Mich., has resigned to become assistant superintendent of production in the Ordnance Division. His former position has been filled by the promotion of E. Menke, formerly general foreman of automobile assembly.

S. W. Monroe has been appointed manager of the Detroit branch of the Harroun Motors Corp. He has served the Harroun organization as Middle Western sales representative since the inception of the company, prior to which he was a district executive for the Maxwell Motor Co.

Harry Bergheyer, who left his place as purchasing agent for the Citizens Motor Car Co. to respond to a call to the colors some time ago, going to a South Carolina camp, has returned to his job because of physical rejection.

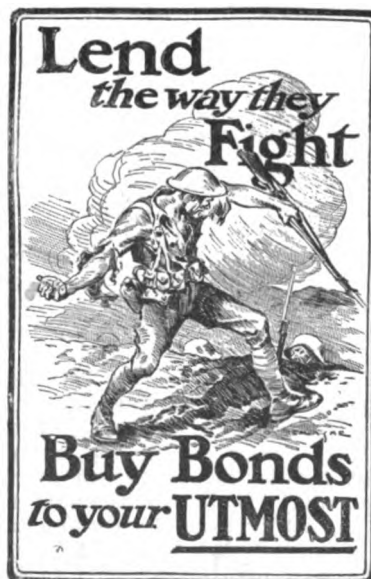
Bruce A. Ott has been appointed general factory manager in charge of all plants of the Maxwell Motor Co. at Dayton, Ohio. Joseph H. Cooper remains as factory superintendent of Plant 1, I. B. Swegles as superintendent of Plant 2, J. C. Pell as superintendent of Plant 3, and Perry Kreitzer as factory superintendent of Plant 4.

L. A. Smith, assistant to T. J. Toner, director of sales and advertising of the Maxwell Motor Co., Inc., Detroit, has been placed in charge of Maxwell and Chalmers sales in the eastern territory, with headquarters in New York.

### "Watch Your Scrap Box"

ST. LOUIS, Sept. 30—"Watch your scrap box," was the advice L. C. Chapman, service manager for the Overland Automobile Co., gave to the 60 dealers who gathered here Tuesday night for a dinner at the American Annex Hotel. Chapman was advising the dealers to put their service departments on a profit-making basis to help solve their war troubles. The time for loss in a service department has passed, he said. He told them of the engineer who proposed to increase the production of a soap factory 20 per cent from the raw material. When his offer was accepted, he put a catch tank at the mouth of the sewer. The scrap box, Chapman said, was the sewer of the service department and every piece in it should be carefully considered and many dollars would be saved.

A. C. Barber, division manager of the Willys-Overland Inc., told the dealers that the Overland branch in London, England, had made a net profit during the war by buying and selling used cars. The dealers present were much interested in the reports of the prospect of selling tractors and accessories handled by companies under control of the Overland interests. This business, it was reported, would be handled by a company known as The Midwest Accessory Co.



## Passenger Car Vital to the Insurance Man

### If He Didn't Have His Car He Couldn't Stay in Business—His Position

KANSAS CITY, Sept. 28—Passenger cars are going to be vital factors in maintaining service to the public in smaller towns near large cities, in many industries, this winter.

For instance, the burden of work on local insurance agents in small towns is becoming so great that they cannot begin to handle their business, and solicit new business. Usually, these local agents have other work besides their insurance; they are farmers, bankers, real estate agents; often the fire and casualty insurance agent is also the life man.

In the Kansas City district, the withdrawal of younger salesmen in these small towns has already produced a marked effect on the insurance business, companies finding that new business is falling off markedly. The agents in the cities have not time to go out to these small towns as often as they used to, the reduction in train service being a serious handicap to frequent traveling.

In this dilemma, general agencies and branches in the cities are stimulating city agents to buy automobiles and cover the small towns frequently. A city agent can take one or two days a week for rural work and by using a motor car, follow up prospects that local agents have uncovered, and develop a great many new ones.

In insurance—and possibly in other lines—the war has not necessarily lowered possibilities of production. Many agents are writing more policies now than ever before. Life insurance agents are concentrating on young men in deferred classes, and older men. The insurance facilities in the army has stimulated the subject for those not entitled to them in civil life.

### Powell Buys Omaha Auto Supply

OMAHA, Sept. 28—The Powell Supply Co., of which the president is Clarke G. Powell, has purchased the entire stock of the Omaha Auto Supply Co. The Omaha Auto Supply Co. has been in existence for seven years, and was owned by Charles E. Fanning, who, on account of other business interests, decided to close out. The stock is said to be worth \$50,000. Part of the Omaha organization goes with Powell, including Manager Wilson.

### Schacht Truck Enlarges Plant

CINCINNATI, Sept. 28—The C. A. Schacht Motor Truck Co. is erecting a new one-story factory addition, 75 by 250. The new structure will be ready for occupancy by Nov. 1 and will be used for assembling.

## Putting the Business of Selling Trucks on a War Basis

(Continued from page 17)

Keeping a good salesforce together is better economy than trying to save a few dollars by letting men who are in the "indispensable" class go, yet it is advisable to weed out from among the employees those who are not producing up to a certain mark.

So another way of keeping business down to hardpan is to get rid of the positive drones, when it is ascertained beyond doubt that there is nothing in their salesmanship worth developing.

This should be made sure of first, as one of the biggest leaks in some concerns is the practice of "hiring and firing," as efficiency experts of late years have been dinning into employers' ears. It costs to train new men, but it is also costly to get rid of men who can be developed with a little patience.

*Care not to let a motor run when a machine is standing is an important means of economizing.*

Talks with repairshop and service station foremen, it is pointed out by the economically inclined, are being made productive of saving through cautioning them to keep closer tab on their men in the matter of handling breakable articles, or in general wasting on the job.

Tire reclamation for service wagon purposes and more detailed attention to shop material salvaging are suggested along "Automobile Row."

Formation of clubs for co-operative buying of office supplies and minor quantities of shop materials even have been suggested by dealers who have no factory connections.

Then there is the "customer drive-away" plan for the branch factory dealer that has been increasingly popular since the war, many finding that it costs considerably less to pay the railroad fare of customers, with perhaps a friend or two along to help drive the cars from factory to purchasers' destination than to have drivers do it in this period of help shortage.

Other war basis plans are now in the "hatchery" and soon may be announced.

## Is There an Electrical Expert in Your Town?

(Continued from page 19)

"There must be no comeback jobs." Service—the kind that makes the customer satisfied—is a part of each deal.

It costs this company from \$700 to \$800 each month for service. This consists of testing batteries, making minor adjustments, inspecting and testing generators, etc. Whenever making an adjustment does not require more than 15 minutes in time, it is gratuity work.

"How can you stand to give so much away?" an officer of the company was asked.

"That is the way we build up and maintain our trade. We do enough advertising in the newspapers to keep our name before the public and trust to our serv-

ice department to do the rest. That our plan is correct is attested by the results. We can keep up with the business only through effort. When a car comes in here with any kind of electrical trouble we make an inspection to ascertain what the trouble is, advise the repair and tell how much it will cost. We establish a fair price in the first place and do only first-class work. We will not quibble with a customer over anything, and endeavor to make him feel 'like a million.'

"We state the price of a high-grade repair and the customer takes it or leaves it. There is no compromise. We will not do a half-way job for anybody. We will not 'just patch it up so I can get by,' for anybody. The customer knows what it will cost in advance and that removes any future discussion. If he does not want us to have the job at our price, he takes it some place else. We usually get him in the end and most likely the delay proves more costly to him. We do not attempt any high-handed methods but are firm in our policies. We get spot cash on delivery of the job so our books are not cluttered up with a lot of poor accounts."

## Requests Suspension of Racing

WASHINGTON, Sept. 30—Voluntary suspension, for the period of the war, of automobile, motorcycle and motor boat racing and speed contests, has been asked by the United States Fuel Administration. The American Automobile Association co-operating with the request has assured the Fuel Administration that it will strictly observe it. Chairman Richard Kennerdell, of the Association Contest Board stated that he has suspended operations and will issue no more sanctions for race meets or speed contests. Sanctions have been previously given for races to be held at Trenton, N. J., Danbury, Conn., Tucson and Phoenix, Ariz., and in Los Angeles, Calif., within the next 2 months, but it is expected by the Fuel Administration that the promoters of these contests will call off the events in order to meet the Administration's request.

## Merchandising Possibilities of the Motor Cultivator

(Continued from page 35)

corn cultivation time, and the motor cultivator just fills the bill. I never had much reason to use it for belt work, but I have sawed wood with it and it worked fine. It will consume about 1 gal. of gasoline for every 2 acres of corn cultivated.

"I don't think there ever will be a time but a farmer will have to keep from 2 to 4 horses. For such work as threshing, silo filling, hauling hay to barn, husking standing corn, etc., there is nothing that will take the place of Old Dobbin. Take, for instance, last winter, when the snow was from 2 to 8 ft. deep.

"I had 100 head of cattle and shock corn in the field. I do not think there would have been any chance for a motor. A tractor is all right to haul on the roads when they are dry, but there are times when they are muddy that a person wants to go somewhere. But the tractor and the motor cultivator cut down the horses and increase the acreage per man. They can be run 24 hours per day in a rush season, and they do not eat when not in use. If I did not have my motor cultivator I would have to keep 3 more horses and have no use for them only to cultivate corn. The price grain and feed is now it is a big expense to keep extra horses."

In mid-summer there was a demonstration of motor cultivators at Champaign, Ill., where they were pitted against 2-row horse-drawn cultivators. The motor cultivators did just as good work as the horse-drawn machines, and did it faster. They conclusively demonstrated their ability to take over a task which always has required horses and which has been the main obstacle to the motorization of the farm.

These all are reasons why the automotive dealer should sell the motor cultivator as well as the tractor, thus doing his share toward making agriculture a real power proposition.

## Coming Events

### Conventions

Chicago, Ill. ....	Convention.....	Oct. 28-Nov. 3
	National Association of Automobile Accessory Jobbers	
Akron, O. ....	Annual, Firestone Tire & Rubber Co.....	Dec. 5-6

### Tractor Demonstrations

Trenton, N. J. ....	Trenton Fair, Harry B. Salter, Supt.....	Sept. 30-Oct. 4
Washington, Ga. ....	Wilkes County .....	Oct. 1-5

### Expositions

Chattanooga, Tenn. ....	Eastern Tennessee District Fair.....	Sept. 30-Oct. 5
Birmingham, Ala. ....	State Fair .....	Oct. 1-13
Kansas City, Mo. ....	American Royal .....	Oct. 7-13
Richmond, Va. ....	State Fair .....	Oct. 7-14
Atlanta, Ga. ....	Eastern State Fair & Automotive Exhibition.....	Oct. 13-19
Dallas, Tex. ....	Seventh Annual Texas Automobile Show.....	Oct. 14-27
	Texas State Fair .....	
Macon, Ga. ....	State Fair .....	Oct. 30-Nov. 9
Shreveport, La. ....	State Fair .....	Oct. 28-Nov. 4



Digitized by Google



ABBREVIATIONS — "A. Knf" Atwater Knf., "Conn" Connecticut, "G & D" Gray & Davis, "Eiman" Eisman, "L.N" Leese-Neville, "N. E." North East, "W. Lard" Ward Leonard, "SS" Straight side, "QD" Quik Detachable, "C" Clincher, "QDR" Quik Detachable Reversible. NOTE.—37½"hr means that the rear tires are 37½" and the front are smaller

NEW YORK  
PUBLIC LIBRARY

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 2

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, OCTOBER 9, 1918

Fifteen cents a copy  
Two dollars a year

## Hudson Dealers Are Ready for the Future

*"We have no other intention than to operate our service and parts station to give Hudson owners the best possible attention."*

Thus writes one Hudson dealer in response to the Hudson 100% war - work announcement. His answer is typical of practically all the rest.

They show a determination to "carry on," realizing that to preserve their identity and their connection with Hudson will be their greatest asset for the future after the war is won.

They know that the Super-Six has already undergone endurance tests which for severity cannot be surpassed even if the war is pro-

longed far beyond present prospects.

Their confidence is complete that when peace comes again and more automobiles can be made, the 57,000 Super-Sixes now in service will have added irresistible evidence of super - quality to the prestige and good - will that Hudson has already earned.

In this certainty of Hudson Super - Six performance is their assurance of permanence and progress after the war.

HUDSON MOTOR CAR CO.

DETROIT, MICH.







THE following list prices of Nash  
passenger cars and trucks are  
effective September 1, 1918:

Model	Passenger Cars
681—5-Pass. Car	- - - - \$1490
682—7-Pass. Car	- - - - 1640
683—4-Pass. Roadster	- - - 1490
684—6-Pass. Sedan	- - - 2250
685—4-Pass. Coupe	- - - 2250

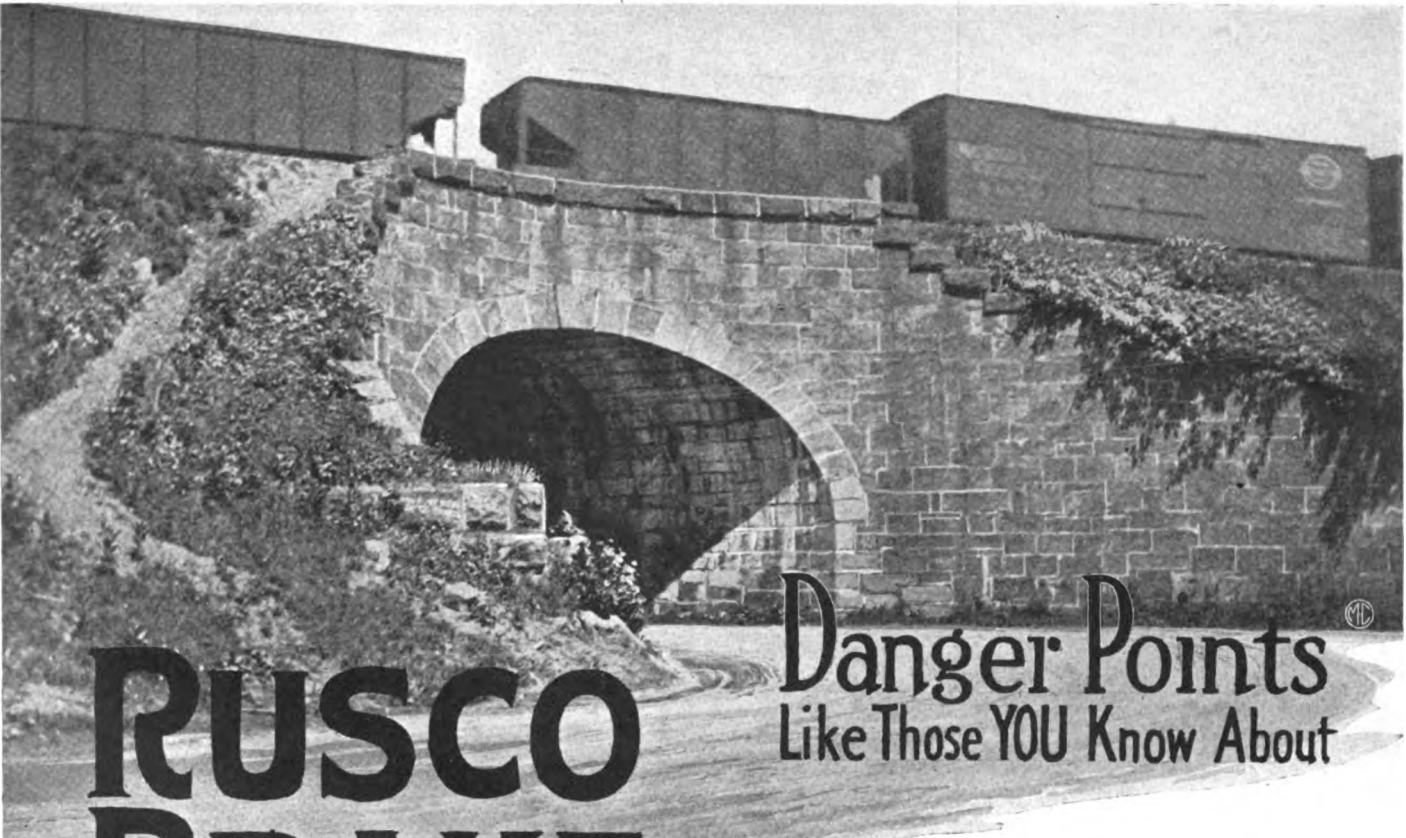
Trucks				
2017—One Ton Chassis	-	-	-	\$1650
3017—Two Ton Chassis	-	-	-	2175
4017—Nash Quad Chassis	-	-	-	3250

*Prices f. o. b. Kenosha*

**The Nash Motors Co., Kenosha, Wis.**  
*Manufacturers of Passenger Cars and Trucks*  
*Including the Famous Nash Quad*

**NASH MOTORS**

VALUE CARS AT VOLUME PRICES



# RUSCO BRAKE LINING

"Between You And Danger"

**Danger Points**  
Like Those YOU Know About

Just carelessness on the other driver's part through no warning and it is up to you to do the quick work at a danger point like above. "The brake is on"—and if equipped with Rusco Brake Lining, it holds.

"Rusco" stands for brake lining made of long fibre asbestos and brass wire. It's impervious to oil and water. It stands as the great achievement of our 88 years' experience in making Webbing for all purposes. Use it and personally know its worth—then you can sell it and know it will safeguard your customers and their families and friends at many Danger Points.

**The Russell Manufacturing Co.**

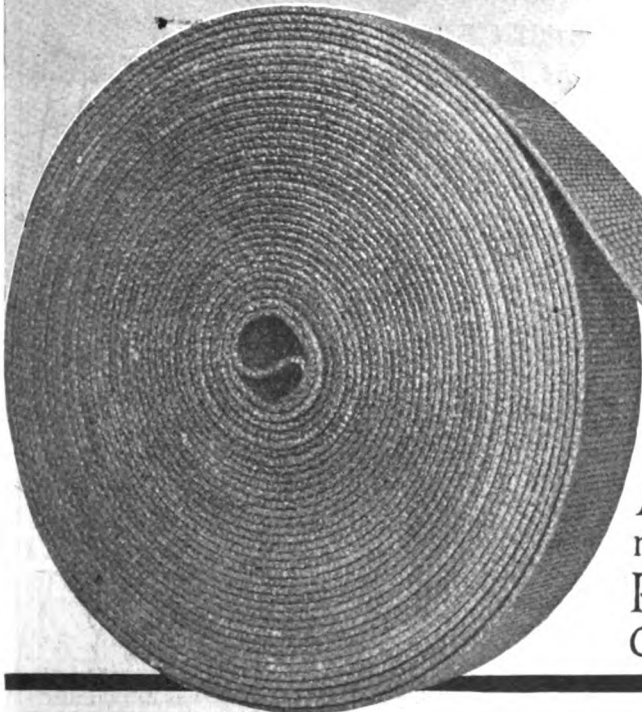
Home Office and Factories **502 Russell Ave.**

**Middletown - Connecticut**

NEW YORK CITY  
349 Broadway

CHICAGO  
1438 Michigan Ave.

DETROIT  
18 Alexandrine Ave. E.

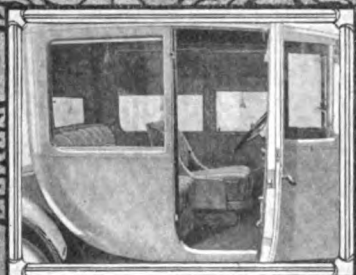


Also  
makers of  
**RUSCO**  
CLUTCH FACINGS



**RUSCO**

# B Exquisite Motor Car Interiors



THE character of any motor car interior depends upon the beauty of the fabrics.

## FABRICS BRIDGEPORT FABRICS

*The Keynote of Harmony*

represent the highest art of the interior decorator. They add distinction to the enclosed automobile. Rare color blendings; smart designs; exceptional quality in material; harmony throughout—down to the most minute detail.

**THE BRIDGEPORT COACH  
LACE COMPANY**

Bridgeport Connecticut

*Branches*

*New York Showroom, 1765 Broadway  
Scovell Iron Co., San Francisco, Los Angeles*



# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

The Class Journal Co.

U. F. G. Building, 231-241 West 39th Street, New York City  
 Horace M. Swetland, President  
 W. L. Ralph, Vice-President B. M. Corey, Treasurer  
 A. B. Swetland, General Manager

Business Department  
 Charles B. Shanks, Manager

Editorial Department  
 David Becroft, Directing Editor  
 Ray W. Sherman, Editor  
 Stanley F. McMinn, Managing Editor  
 J. Howard Pile

## Branch Offices

Chicago—Mallory Bldg., 59 East Madison St., Phone Randolph 6900  
 Detroit—95 Fort Street, West, Phone Main 1351  
 Cleveland—Guardian Bldg., Phone Main 1143

Subscription, Per Annum (Postage Paid).....\$2.00  
 Foreign and Canadian Subscriptions..... 4.00  
 Single Copies (Postage Paid).....10 Cents

## Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to MOTOR WORLD.

Cable Address, "MOTORWORLD," New York

Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 248 West 39th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. C. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
 Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

Buy Bonds .....	7-10
Helping the Dealer Meet War Problems ....	11-14
Solving War Problems in a Garage .....	16-20
School for Owners .....	29
This Week's Reilly Story .....	15
New International Tractor .....	32-33
Screw-Thread Practice in the Repairshop...	21-23
Repairshop Shortcuts .....	24-25
Double Reduction Drive in 3 and 5-Ton Whites	34
Coast Dealers Take to Tractors .....	36
Editorials .....	26
Automotive Equipment .....	31
Letters from Readers .....	27
Legal Department .....	28
Retail News .....	30
Regular News Department .....	38-44
Calendar .....	45
Motor World Guide:	
Passenger Cars .....	48
Motor Trucks .....	46-47
Farm Lighting Systems .....	45

Advertisers' Index on Pages 118-119

# "NORMA" PRECISION BALL BEARINGS

(PATENTED)



National conservation, rightly understood, contemplates the manufacture, sale, and use of machinery and equipment possessing within itself the maximum of "staying power." Repairs and replacements on old equipment may be an economical virtue. But a truer conception of economy demands the making of machines so good that repairs and replacements are minimized.

Builders of high-grade ignition apparatus and lighting generators—and builders of the high-grade cars, trucks, tractors, power boats and airplanes on which they are used—know that the superlative dependability of "NORMA" Ball Bearings contributes largely to the trouble-proof-ness of any equipment of which they are a part.

**Be Sure—See That Your  
Electrical Apparatus  
Is "NORMA" Equipped**



**THE NORMA COMPANY OF AMERICA**

1790 BROADWAY

NEW YORK

Ball, Roller, Thrust and Combination Bearings



## Take Off Your Own Coat

Do you know, Mr. Dealer, to a dead moral certainty that each one of your Departments is paying its way?

Now, if ever, every branch of your business must stand on its own bottom.

It's no time to be carrying any dead-wood.

Suppose you take off your coat and get down to first principles again.

You know the old saying about the value of "the eyes of the boss."

Use them, along with your experience, to cut out the last vestige of inefficiency.

There's still another reason for taking off your coat.

Men may be scarce, but you still have your two arms, haven't you?

Possibly they are a bit muscle-bound and would be all the better for some vigorous exercise.

The chances are that it will do you good to get back to that old, personal touch, that put your place on its feet in the beginning.

Some of your old-time ability is worth buying over again; you can cash in on it later—with interest.

So if you haven't done so already, count yourself in on the daily muster of man-power.

*Published in the interest of the Dealer by the National Association of Automobile Accessory Jobbers.*

Write to-day for our helpful book,  
"How to Run a Garage." It's free.



### **National Association of Automobile Accessory Jobbers**

**WM. M. WEBSTER, Commissioner**

**1916 CITY HALL SQUARE BLDG.**

**CHICAGO, ILL.**

Below is a picture of the first editorial page as it will appear in next week's issue—the Winter Business Number. Be on the look-out for your copy. Read it carefully.

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, October 16, 1918

No. 3

## What You Are Going to See in This Issue of Motor World

### *And Why It Is Published*

**I**N winters gone by the problem of the trade has been to keep cold weather from pressing down the business curve.

This winter there is a double problem—winter and war.

The conditions are most unusual, and they have been thoroughly investigated by Motor World in preparing this Third Annual Winter Business Number.

The result of the investigation has disclosed that the trade CAN get by—if it operates along certain well defined lines

What these lines are is disclosed in the pages that follow.

Every dealer, garageman, repairman, accessory man, jobber and salesman should study them.

*Study of this issue may mean your successful future.*

Why?

Because some day the war will end, and if you're still in business when that time comes you will have a running start to a successful future. The man who is forced out now—or who quits without necessity—who takes down the sign over the door—will have to start all over again—and the starting will be hard.

To-day every man has two jobs:

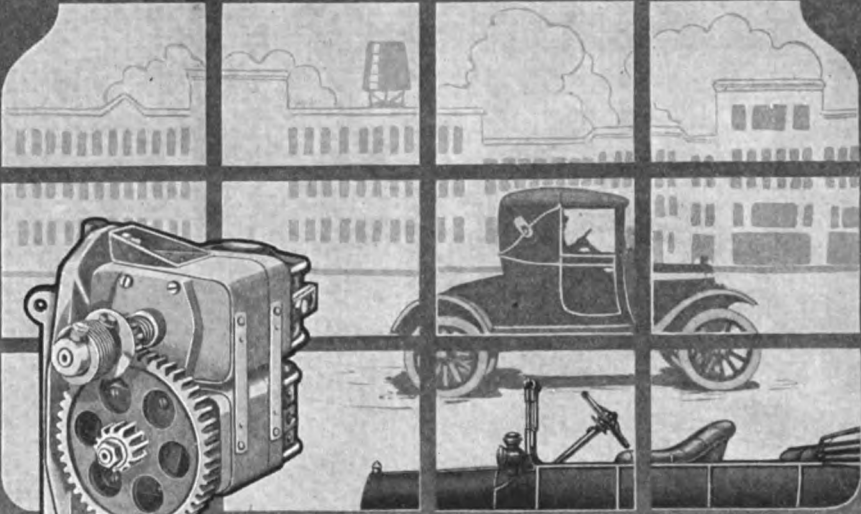
1—Finish this darned war and get back to business.

2—Keep his business here so he will have something to get back to.

And in this issue you'll find the how-to-do-it.

Last advertising forms of the  
Winter Business Number will  
close on Oct. 14. Send copy at  
once.

When writing advertisers please mention Motor World—it identifies you



**For Every FORD**  
**GRAY & DAVIS**  
**STARTER**

The remarkable success of the Gray & Davis Starter is due to the fact that the starting and lighting system problems for Ford cars have been solved at last by Gray & Davis engineers—giving successful service on thousands of Ford cars everywhere.

Dealers who sell Gray & Davis starters please their customers, thereby retaining them for future business.

*Booklet A-62 upon request*

**GRAY & DAVIS, Inc., BOSTON, MASS.**  
**UNIVERSAL CAR AGENCY, WINDSOR, ONT. CANADA**

# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, October 9, 1918

No. 2

## STOP THIS BEAST!



**ARE YOU BUYING TWICE AS MANY AS YOU  
BOUGHT THE LAST TIME?**

*The Third Loan was \$3,000,000,000. The fourth loan is \$6,000,000,000.*

*This is just double the amount.*

*If you buy from your bank balance it isn't enough. You should also  
buy on your future income.*

*The men over there are staking all the future they have. You should be  
willing to stake your financial future for a few months.*

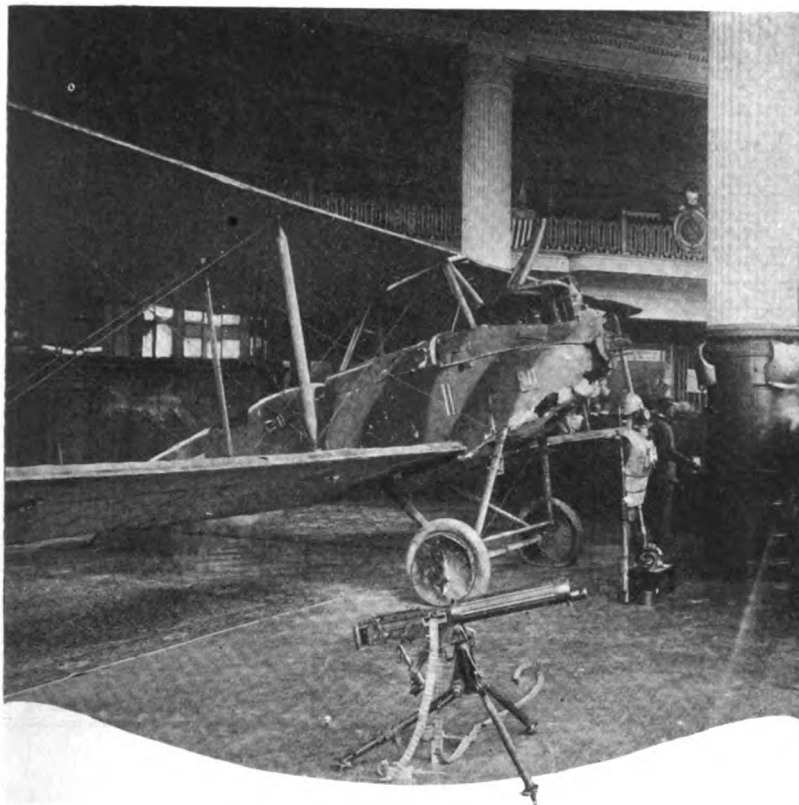
*Better sit down and do some more figuring. This thing's got to go over  
over here if it's going to be over over there.*





*Goodrich is using one of its big windows for this map of the war front and two posters of husky Yankee boys whaling the life out of the Kaiser's pets*

## New York Dealers Get Behind Fourth Liberty Loan

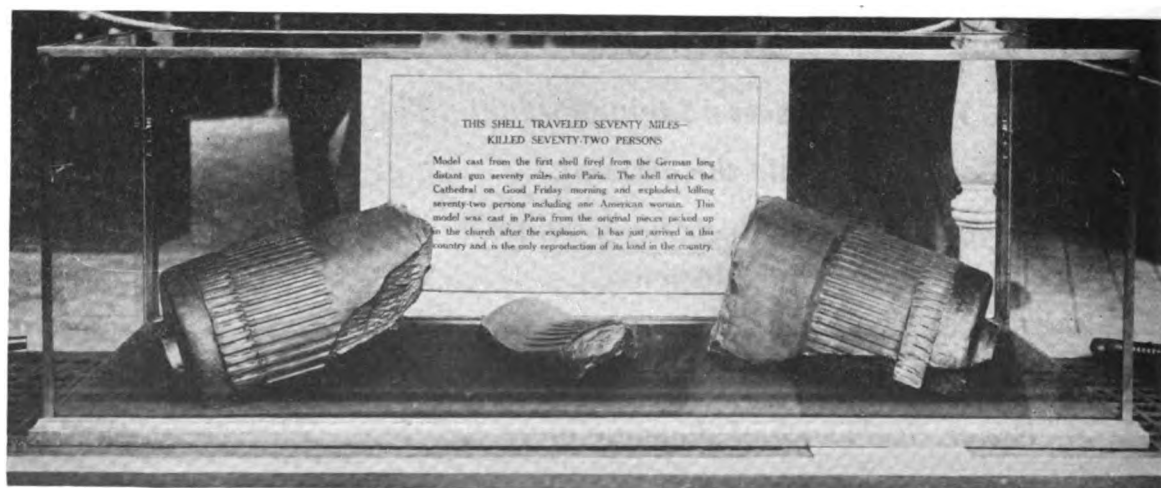


*Above — Packard has in its salesroom an airplane that has been through some scrap*



*In the United States Rubber window is this figure with real bonds in her hand*

*Below — This case in the Chevrolet window contains parts of the 70-mile shell that wrecked a Paris church*



# Turn Their Salesrooms Over to Bond-selling Sales Displays



*Chevrolet shows this captured Albatross. The name on the side is supposed to be that of the German fighter who flew it*



*Hupmobile has made its interior mirrors into displays. Hands at the right were made with red ink and are real*



*Maxwell always uses its big Circle corner to good effect, and this time has produced a display that is one of the best on the Row*



*The United States Rubber Co., one of whose windows is shown elsewhere in detail, is using its entire frontage in the manner shown. With all these displays the Row looks like anything but an Automobile Row*



*LEND THE WAY THEY FIGHT*



# Helping the Dealers Meet the Problems of War

*Franklin Calls Them All to the Factory and They All Talk Over How They're Going to Get By*

## "WE'LL STICK TILL WAR IS WON!"

*Whereas, We, the dealers of the Franklin Automobile Co. in convention assembled, this twenty-fifth day of September, 1918, in the City of Syracuse, N. Y., hereby highly commend the action taken by the Franklin Automobile Co. in committing themselves to 100 per cent war work.*

*Be It Resolved, That we, the dealers, fully realizing the importance of the automobile in winning the war, do hereby pledge ourselves to maintain our respective establishments to the best of our ability until the war is won.*

SYRACUSE, N. Y., Oct. 3—Both the Franklin factory and dealers are, like all others, having war-time problems.

The factory is going on 100 per cent war work Jan. 1.

The dealers will have no cars to sell.

Yet the factory wants the dealers to be on the map when the war is over, and the dealers, too, want to be there.

Wherefore the Franklin Automobile Co. called them from all parts of the United States to a war conference at Syracuse. The meetings were held at the Hotel Onondaga.

### Will Stick Till the War Is Over

*One important fact stands out, which is that the dealers declared in a formal resolution that they would do their darnedest to stick until the war is over.*

The factory said it would supply parts meantime, would keep its experimental room at work and would be ready after the war to jump back into the rising production scale which was interrupted by Kaiser Bill.

At a luncheon at the Onondaga the dealers were addressed by E. E. Peake, executive secretary of the National Automobile Dealers' Association, who had been invited there by the factory to give the dealers the viewpoint of a man who has been ac-

tively engaged in national trade affairs during the recent trying months.

As one dealer put it, "Peake's talk gives me the answer—it makes me certain that I want to stick, and if I want to do that, then I can find the way."

From beginning to end there was the note of encouragement. Because of his close touch with affairs at Washington, his opinion of the Government's feeling toward the automobile industry is particularly valuable. "The War Industries Board at Washington," Peake said, "considers the automotive factor one of the greatest in the winning of the war. Material which is now going into the manufacture of automobiles is readily converted into military supplies. The manufacturing facilities which our industry has built up offer the greatest opportunity for maximum production of munitions and implements of war. This is the reason that the automobile business has been affected. This is why the Franklin plant and other plants throughout the country are getting upon a hundred per cent war basis.

"There has been no unjust discrimination against the automobile business. The War Board at Washington wants to see every one of the five million cars now running, kept on the road. And in my opinion the Board will see that there are men enough for service work to make this possible, particularly for utility purposes. In some places the attitude of the local draft boards has been unfavorable in declaring the automobile business non-essential, but I can say this—that such an attitude is out of harmony with the wishes of the men higher up at Washington."

Peake made the point that the war is to be won by the automotive industries.

"Twice," he says, "the automobile saved Paris, first in 1914 when it transported the 'Taxi-cab Army,' and second, this spring when American motor trucks carried the twelve thousand 'Yanks' who filled the gap and turned back the German drive. It will be the Liberty motor that will carry to Berlin the message that we wish to carry there, and history will make it a matter of enduring pride for all those men who have been identified with such a tremendous power for right."

Answering the question of what he would do if he were in the Franklin dealer's position, Peake said that the problem was largely an individual one, but certainly not one that would impose a burden that could not be mastered. He pointed to the smooth sailing the industry has enjoyed for years and stated that the present situation was the "storm" that, as sure as fate, always comes into personal or business life to work out to the good of all concerned.

### A Perior of Test

Now is the time that the sea-worthiness of a business is tested and it will be the good manager who survives. Peake said that if any dealer knows only those methods that the loose days behind us have encouraged, the present emergency extends little inducement to make him hold on, but the man who treats his business as a "business," is bound to come through safely and highly benefited by the experience.

He emphasizes strongly the establishment of a "cash" basis for all work, that service at a loss be stamped out for good and all, that wasteful selling methods and "long deals" be eliminated, and that overhead be trimmed, consistent with the amount of business being done.

The experience that the automobile





110 Franklin Dealers attended the war convention at the Hotel Onondaga, Syracuse, N. Y., to learn of the factory's plans and to swap ideas on the best way to get by during the war period. No. 1 is E. E. Peake, Kansas City, executive secretary of the National Automobile Dealers Association, who addressed the dealers; No. 2 is Sales Manager S. E. Ackerman; No. 3 is H. H. Franklin, president of the company. The register of the convention contained the following names:

### Dealers at the Franklin Meeting

- |                                    |                                   |  |                                      |
|------------------------------------|-----------------------------------|--|--------------------------------------|
| A. Auble, Jr., Akron, Ohio.        | W. M. Davis, Kingston, N. Y.      | G. H. Leonard, Auburn, N. Y.             | Haven Sawyer, Bangor, Me.            |
| J. P. Beck, Saginaw, Mich.         | O. D. DeWitt, Scranton, Pa.       | S. H. Lewis, Binghamton, N. Y.           | Art. Schlobohm, Newark, N. J.        |
| J. P. Beggs, Franklin, Pa.         | H. G. DeWitt, Scranton, Pa.       | W. F. Lintz, Norfolk, Va.                | C. W. Shaffer, Watertown, N. Y.      |
| H. S. Belden, Jr., Canton, Ohio.   | Glen Diddel, Indianapolis, Ind.   | E. C. Long, Quincy, Ill.                 | Mr. Shoemaker, Canton, Ohio.         |
| E. E. Bellows, Saranac Lake, N. Y. | W. H. Diddel, Indianapolis, Ind.  | C. A. Lytle, Ogdensburgh, N. Y.          | P. H. Skillin, Oswego, N. Y.         |
| O. C. Belt, Columbus, Ohio.        | W. J. Doughty, Detroit, Mich.     | J. F. McLain, San Francisco, Cal.        | A. E. Spielberg, South Bend, Ind.    |
| C. N. Bender, Memphis, Tenn.       | Oak Duke, Wellsville, N. Y.       | C. E. Mahaney, New Bedford, Mass.        | F. C. Stevens, Des Moines, Iowa.     |
| Kent Bender, Newark, N. J.         | J. A. Farrell, Cortland, N. Y.    | R. C. Manning, Trenton, N. J.            | T. W. Stewart, Newburgh, N. Y.       |
| L. F. Birdsong, San Antonio, Tex.  | W. W. Garrabrant, Utica, N. Y.    | F. J. Meckel, Mexico City, Mex.          | James Sweeten, Philadelphia, Pa.     |
| L. C. Bolles, Plattsburgh, N. Y.   | D. F. Garber, Philadelphia, Pa.   | C. G. Moorman, Roanoke, Va.              | Miss Thompson, East Liverpool, Ohio. |
| Knapp Brown, Sioux Falls, S. D.    | C. W. Giles, Rochester, N. Y.     | Miss M. F. Morely, East Liverpool, Ohio. | G. A. Tisdale, New York.             |
| S. F. Carpenter, Carbondale, Pa.   | J. P. Grady, Hartford, Conn.      | E. R. Nelson, Ishpeming, Mich.           | Cowles Tolman, New Haven, Conn.      |
| W. M. Carr, Pittsburgh, Pa.        | H. E. Hartman, Nashua, N. H.      | George Ostendorf, Buffalo, N. Y.         | G. H. Ven Demark, Elmira, N. Y.      |
| C. S. Carris, Cleveland, Ohio.     | F. B. Heathman, Dayton, Ohio.     | J. G. Pelton, Minneapolis, Minn.         | Thomas Watson, Batavia, N. Y.        |
| R. M. Clapp, Greensboro, N. C.     | C. G. Heck, Albany, N. Y.         | H. Pelton, Omaha, Neb.                   | W. L. Wilcox, Providence, R. I.      |
| F. A. Close, Uniontown, Pa.        | R. C. Hepburne, Charleston, S. C. | C. B. Pennock, Nashville, Tenn.          | E. F. Williams, Kansas City, Mo.     |
| O. H. Coolidge, Rutland, Vt.       | Nicholas Hughes, Paterson, N. J.  | H. B. Pulsifer, Worcester, Mass.         | A. W. Wilson, Toronto, Ont.          |
| L. A. Cooper, Geneva, N. Y.        | F. J. Jager, Springfield, Mass.   | Jansen Roberts, Poughkeepsie, N. Y.      | J. D. Woodside, Charlotte, N. C.     |
| L. A. Cosgrove, Charleston, S. C.  | A. M. Jones, Norwich, N. Y.       | Newman Samuel, Cincinnati, Ohio.         | T. A. Young, Syracuse, N. Y.         |
| S. A. Courson, Williamsport, Pa.   | W. F. Kneip, Baltimore, Md.       | F. H. Sanders, Chicago, Ill.             |                                      |
| H. D. Cushman, Portland, Me.       | O. A. Lawton, Boston, Mass.       |  |                                      |
|                                    | E. W. Lawton, Syracuse, N. Y.     |  |                                      |
|                                    | W. S. Lee, Wilkes-Barre, Pa.      |  |                                      |

trade is now going through should be rated as the dealers' part of the sacrifices that are being paid in the world's struggle. In Peake's estimation, there will be two classes of men who will be highly regarded when the war is over, those who did the fighting on the front and those who, by sticking to their busi-

ness and maintaining this country's commercial fabric and earning capacity, do the fighting on the "Home" line.

"In the future," he said, "the dealer has everything to look forward to. The war will teach the universal use of the automobile, it will emphasize the need of good roads, and will be the means of con-

structing transcontinental highways over which motor traffic will be maintained on an equal basis with the railroads."

The opportunity for the opening up of markets heretofore undeveloped seems to Peake to be a foregone conclusion.

One of the most interesting messages came from former production manager

George D. Babcock, who is now a colonel in the Ordnance Department, and who has just returned from France. Colonel Babcock was unable to stay in Syracuse for the meeting but transmitted this hopeful news from the front:

#### Good News from the Front

"Tell the boys that we have a steady stream of men and a steady stream of supplies so that it is only a question of time till America and her Allies are victorious."

The morning session continued for two hours and was taken up by talks by a number of the dealers, some of them prepared beforehand and some impromptu. Sales Manager S. E. Ackerman outlined in detail interesting points regarding the company policy during the war period, and the service question was touched upon by Mr. Baker.

Answering the question that sometimes has been raised, whether the Franklin company would manufacture automobiles provided the Government would rescind some of its regulations, Ackerman stated that the policy is unalterably fastened to 100 per cent war work for the duration of the war, and that henceforth every facility at the command of the factory will be directed to the winning of the war. There are 578 cars yet to be built, after the production of which the factory output will be given over exclusively to war contracts. Mention was made of the many compliments received from bankers, business men and Government officials on the stand taken by the Franklin company.

#### Advertising Campaign to Continue

Advertising during the war period will be depended upon largely to keep the Franklin car before the public. The good will that the product and dealer organization has created must be preserved. The company has lately had a list of magazines for circulation of 6,230,000, and it is the intention to keep up representation in this field. Even if there are no cars to sell the company does not want the public to forget the Franklin car.

It is recommended strongly, that the advertising of the dealers be continued through the war period, and although the volume of advertising cannot be as great, dealers can nevertheless find opportunity to advertise profitably. It should be their object to pick up business where it left off, and in order to do so the list of prospects will have to be kept well informed.

The value of advertising the used cars prominently was cited as one way to establish the impression that the dealers are remaining in business. The publication of records of the operating cost and worth-while performance of Franklin cars was also mentioned.

#### Service and Parts Discussed

The question of parts, Baker stated, is now fairly well in hand, considering the conditions. He expects to be able to take care of requirements in good order, as the stock on hand at the factory is in

better shape than it has been for some time. It has been possible to arrange for certain outside facilities for manufacturing some of the less intricate parts, and thereby to gain considerable headway. There is likely to be little hold-up in parts made of the commercial grades of steel, but where alloy steels are required the situation is not so certain, as the Government demands must be taken care of first and permission to purchase such stuff must be obtained officially. He mentioned that it is not going to be possible to supply the later design of various parts of the Series 9-B car for Series 9-A cars, but in some cases it may be necessary to substitute such parts. He also stated that parts for a new type clutch can not be supplied for earlier cars.

It was emphasized that the company would adhere strictly to the ninety-day guarantee. The suggestion that guarantee be put on a mileage basis, rather than a time basis, was explained by Baker to be impractical.

#### What the Dealers Had to Say

The first dealer to be called upon was O. A. Lawton, of Boston, who was introduced as the biggest Franklin dealer in the country. Lawton spoke mainly regarding the reduction of his large overhead. His main salesroom on Commonwealth Avenue, which comprises 12,000 sq. ft. of floor space, has already been rented, and his sales activities are now centered at his service station. While the expenses for rental are still quite high, he has every prospect of sub-letting a portion of this building to the Government. Lawton is a strong believer in the possibilities of used car sales and his organization is being prepared as fast as possible for this kind of business.

#### Getting Service Well in Hand

What Philadelphia was doing to meet the situation was told in an interesting way by James Sweeten, Jr. He mentioned particularly the difficulties introduced by the labor situation in that locality, where boys fifteen and sixteen years of age are earning around \$5 per day, and skilled mechanics between \$8 and \$10 per day.

To obviate all misunderstanding with customers, relative to labor charges, the Sweeten company is adopting the policy, on all jobs exceeding a \$50 estimate by inspectors, of itemizing the necessary work and submitting it to the owner for approval before proceeding.

Sweeten is putting his service business strictly on a cash basis at once. The Philadelphia sales force is now reduced to five men; ten men have already gone into the war. The remaining salesmen have voluntarily offered their services for mechanical work, in order to relieve the situation in Sweeten's shop and to make possible the maintenance of Franklin cars in the territory on a good operating basis.

Sweeten has petitioned the Philadelphia draft board to consider the work of these men essential, and although no decision has been reached he is in hopes the answer will be favorable.

As war conditions are reducing the time necessary to be spent on sales, Sweeten is enabled to study in detail the matter of service, and sees no reason why the earning capacity of his shop can not be raised because of this close contact. He welcomes this period as a chance to pick up the loose ends and to raise the standard of his business by concentration on details that have formerly been passed by.

The Philadelphia dealer has made an exhaustive investigation of the truck and tractor field and has come to the conclusion as far as his interests are concerned that the taking of such lines would be inadvisable. Sweeten says that he is playing a waiting game, meeting each situation as it arises, and expects that his policy will be a winner.

#### Wilcox to Build Favorable Opinion

W. L. Wilcox of Providence looks upon this war period as a fine chance to build up favorable opinion for the Franklin car. He expects to renew close touch with owners through spending more time on service. Furthermore, he plans to keep a late type car on the road constantly and *will turn it over for a day or so to owners of earlier Franklin types in order to establish a first-hand knowledge of the car, and thereby form their opinions prior to the time when the market re-opens.*

He believes in maintaining his advertising and is dispensing with his separate service station and is planning to handle all of his work in the building in which his salesroom is located.

In Cleveland, Clayton S. Carris is faced by the recent occupancy of a brand new building. He is hopeful of meeting the situation by leasing the property under an arrangement that is just about to be closed. Carris is hopeful on the question of service, for, although he has lost a considerable number of men, he is able to retain a sufficient force with deferred classification under the draft to keep his plant going efficiently and on a money-making basis. All work at the Cleveland place is charged for on a cash basis. While this policy was somewhat revolutionary, it created a minimum of ill feeling and at present is well accepted by all Cleveland customers.

#### Belt Looks for New Business

Although he terms himself an inveterate gloom, O. C. Belt, of Columbus, proved to be the champion optimist. He feels that the man who has been operating on sound principles in the past is certainly going to be able to meet what the future has in store. A great deal depends upon resourcefulness.

He is banking strongly on the support of his owners. Through a series of letters he made plain to them his purpose to maintain his establishment and to continue to render service as long as it is possible. His owners understand that such an arrangement is almost entirely for their accommodation, and consequently Belt's bid for their business on supplies meets with a hearty response. Of

a large number of owners from whom he has heard, only two are unable to throw their trade his way.

Belt has compiled data showing that the average yearly mileage of the Franklin car in his territory is 7500 miles, from which he has estimated that the renewal demands on tires alone will create a gross profit of from \$10,000 to \$12,000 a year. He is also figuring on battery sales as a means to boosting this total. Belt also is planning to sub-let part of his building, which is new, this year.

The advertising in the Columbus territory is going to be continued, Belt said. He does not plan to use quite so large space as formerly, but will do all in his power to keep the Franklin car and his own establishment before the public—all with a view to conserving the goodwill that has been created in his territory by a number of years of hard work.

#### Andy Auble and Used Car Sales

Andy Auble prefaced his remarks by contrasting the war situation with the experience of the old lady who, when she had her first glimpse of the Pacific Ocean, remarked, "O my, I thought it was bigger!" This remark typifies Auble's belief that the war problems will not be as big as we might at present think they are. He figures that conditions are going to allow the dealer to make a real estimate of himself and to take strict account of his business. It is a great opportunity to plug up the leaks that have appeared in the rush of sales work associated with the tremendous demand for cars.

In Akron, the Franklin dealership is already doing a nice business in used cars. Auble believes that the used car has come into its own, and he stands for getting out of it all there is in it. He states that by a reasonable amount of work on the car the profit can be boosted considerably, and cited as an example a certain car which before repair would

scarcely bring \$300, selling at \$1,000 in its present condition. He is also a strong believer in maintaining service and doing so at a profit, for in this way good-will can be preserved. In closing his remarks he urged the support of all dealers for the conservation movements that the Government may promote.

#### Wartime is Helping Sanders

Speaking for Chicago, Frank H. Sanders remarked that he is almost glad that the situation has happened. He says that he is discovering a lot of things about his business that closer contact has uncovered. He was frank to say that the pressure of ever increasing volume of business had brought with it certain wasteful practises which are now being wholly eliminated, to the extent in fact that every transaction in whatever branch of the business is yielding a satisfactory profit. Already Sanders has reduced his expenses \$3,000 per month.

Chicago is taking this chance to educate its owners along the proper lines, particularly that service is an item for which the owner should bear the expense. He mentions that this conversion is not as hard a job as he thought it would be and that his customers are responding in fine spirit. He looks forward to this refining process being retained by the automobile business for good and all.

After a thorough investigation of the truck and tractor propositions he has definitely decided not to take on such a line, feeling that his organization and facilities can best be maintained through worth-while changes within itself.

A number of dealers were called upon to say just a word, among them W. J. Doughty of Detroit, who let it be known that he expected to join the Air Service very soon. Doughty has taken complete charge of the service and has of late been most successful in teaching owners how to care for their own cars.

Cowles Tolman of New Haven left a very good thought with the dealers. He was a short time ago confronted by a ruling of the Draft Board instructing his Service Department foreman to get into some line of war industry immediately. Such a move would have had a serious effect on the New Haven business. He immediately set about to obtain information which could be presented to the Draft Board showing that his foreman's services were absolutely essential.

#### Tolman Converts the Draft Board

By a careful canvass of his owners he found that fully 40 per cent of his cars were engaged altogether in necessary work by doctors, munition firms, manufacturers, hospital work and the like. These data were drawn up in the form of a legal presentation and he was able to get a reversal of the order and to establish a worth-while precedent for the automobile business in that territory.

F. B. Heathman of Dayton regards the answer to present day problems strictly in the light of whether he wants to sell Franklin cars after the war. If so he figures that the ways and means will be found to remain in business.

L. F. Birdsong of San Antonio was the last dealer called upon for remarks and brought out some interesting details regarding Texas conditions, citing particularly the influence of army camps and crop conditions on business in that territory.

Mr. Ackerman commented on the value of the past Franklin conferences, especially the way in which they strengthened the ability of the organization to accomplish things. That 1918 has been a successful year is indicated by the shipping records, which show 536 more automobiles than last year. And at the same time 141 out of the 238 dealers showed an increase in business.

## 17 Don'ts for the New Motor Truck Dealer

By C. E. Lightfoot, G. M. C. Branch Manager, St. Louis

**DON'T** go into the motor truck business as a makeshift. Go into it as the real thing or stay out.

Don't grab the first truck offered to you to sell. Survey your surroundings and get a truck that fits.

Don't cut prices. Either the truck is worth the factory price or you have made a mistake in your line.

Don't waste your efforts. The truck business will live a long while and build on a substantial foundation.

Don't think the trucks will not sell in winter. Motor car business was more or less seasonable, but serious teaming goes on all year.

Don't give loose terms on trucks. A

business that needs a truck can pay in a reasonable time.

Don't start out to sell trucks broadcast. Pick out what looks like your best line and stay with it.

Don't forget that you have overhead. That has wrecked many motor car dealers, but the lesson seems to be little learned.

Don't promise too much. Each buyer has a definite object in view and if you can't meet it pass it to the other man.

Don't overlook the opportunity when horses are falling on the street. The motor truck doesn't mind cold when at work.

Don't promise too much service. The

motor truck is a business proposition all around.

Don't try to sell motor trucks on looks. Utility is the only question.

Don't bid for a used truck. If it would do the work the owner would not be buying a new one.

Don't think you can get rich overhauling used trucks. Smarter men have tried that before.

Don't forget that the truck business thrives on pleased customers.

Don't lie about maintenance costs. Most truck owners have good bookkeepers.

Don't forget that truck drivers are human. Treat them right and make them loyal to you and your truck.

*THE employees of C. J. Reilly, Inc., believe in making our place of business a nice place for you to come to.*

*Because we are courteous and obliging we are not seeking tips—and we ask you not to offer them to us.*

*We are men and women working for compensation, and when we are no longer satisfied we shall seek employment elsewhere.*

*We seek to please the patrons of this business because we know the success of this company and ourselves lies in retaining your good-will and continued patronage. The giving of tips is not pleasing to us, to the company or to you.*

*Thank you.*

# Servant or Man?

*By Ray W. Sherman*

THE whole organization of C. J. Reilly, Inc., was gathered in one of the meetings that had been held about once a month for some time. The employees liked them and the boss found they were a wonderful thing for preventing discord and discontent and for keeping the air sweet and refreshing.

In these meetings the boss always had something to say, but the gang was getting so it could talk a little itself. The result was that many ideas were brought out and made use of, and the men and women in the organization came more and more to feel they were a part of it.

"An now," said Reilly, "as the session was near a close, there is one other thing I have been thinking about for some time. It concerns all of you people and especially does it concern me and the fine business I am trying, with your help, to build here in Callawassa.

"We have made the Sennett car a name that means something. We are putting over the Sayanna truck and the Strongman tractor, and we are the leaders in the automotive trade in this section of the state. I hope we can always be so.

"But the other day a man I know well said something to me that set me thinking, and I decided I would tell you folks about it the first time I got a chance. The thing I have in mind is tipping. This friend of mine was speaking of the service station of another company in Callawassa and was remarking what a nuisance it was to him to have to tip the employees all the time. I told him I didn't think there was much of that in our place and that I hoped there never would be.

"He said he would drive into this service station and some of the employees would jump this way and that way for him and be ever so nice, and that he knew all they were doing it for was for the tip they expected him to give. I asked him how he knew they expected tips and he said he was just sure of it, that's all.

"Of course, it's natural for a man or woman to want to get hold of all the money possible, because money is the thing with which we get the comforts of life, but in addition to money there is one thing we must never be without, and that is our self-respect. I don't believe the man or woman who makes a practice of accepting tips can maintain a very high degree of self-respect.

"In some callings it may be different. Everyone expects to tip a waiter, yet we all know the attitude we hold toward waiters. They are in a serving class, along with janitors, footmen, butlers and all those other people who wait on folks who consider themselves the betters of the serving men and women. None of us would want to be classed as a servant, yet we take on part of the characteristics of the servant class when we go into the tip business.

"In America we are all free men and women. We can go and come as we please. If we don't like a job we don't have to stay. We have the right and opportunity to rise as high as we will. One day we may be working for some man, and in a few years we may have that same man working for us. This is not an uncommon occurrence.

"So you see there are no class lines that can't be broken, whereas in the old

days in this and foreign countries there were class lines above which men and women could not rise. A servant knew he was a servant and he never tried to be anything else. He was content to be a servant all his life and to bring up his children as servants, and he was very grateful if his master threw him out a little tip now and then to make life more worth the living and to make the servant a harder worker. It also was the master's way of saying he was better than the servant and could afford to give his spare change to the man who toiled and slaved for him.

"That's where the tipping practice began, and we are continuing it in this country with those classes of workers who do the serving work. It will be most regrettable if the practice so worms its way into our other lines of work that the workers lose their self-respect and sink down to a lower level.

"Every man and woman in our organization is an honest American worker, with all the rights that God gives to human beings in a free country, and I would hate to see any of you degrade yourselves to the point where you would grovel at any man's feet just because you thought he would pay you for doing it. There is one thing it always pays to be—and that's a man or woman.

"And there is also my own selfish side to it. I don't want the Reilly organization to be known as one that is filled with tip-takers. I don't want this place to get the reputation of being one that gives service only to those who tip those who give the service. I want this place to be known as one in which we give honest

*(Continued on page 44)*



# SOLVING WAR PROBLEMS IN A GARAGE

## *Mac Did This*

- 1—Started in Business Five Months Ago
- 2—Doubled Business Every Month
- 3—Uses Girls and Machinery to Solve Labor Problem
- 4—Sells Accessories and Used Cars
- 5—Uses Motor World Ideas to Do All These Things

**T**HIS is a story of a man who had started a garage 5 months ago, who has doubled his business each month and is still growing. This story ought to interest the garageman who finds he is having hard sledding these days.

"Mac," they call him. His name is A. G. McMillan. His place is at 117-121 South Third Street, Harris-

burg, Pa. His sign says, "Mac's Garage." Most everybody in town knows him and they all say he is a live wire. Lots of people think his real name is "Mr. Mac," so well is he advertised.

He started out some years ago working for somebody else. He rose to foreman of a Ford service station and then became dissatisfied. They did not do things to suit him. He could not spend 8 cents for shop

equipment without having to go before a board of directors.

This concern was content to let things drift along in the old rut and no thought was ever given to getting out of the rut. The business declined and was reduced from two floors to one. Mac saw his chance. He got a little money together and rented the other floor and started a business up for himself in competition with the other concern.

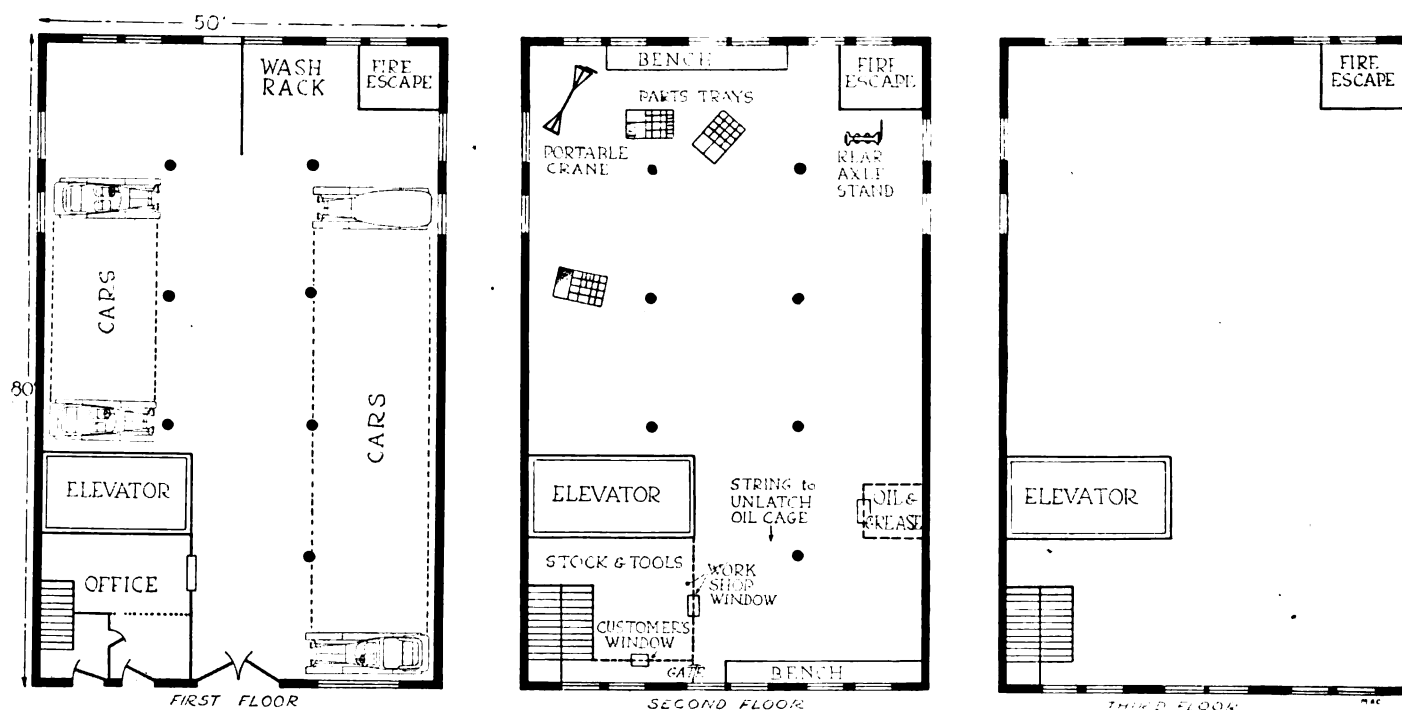
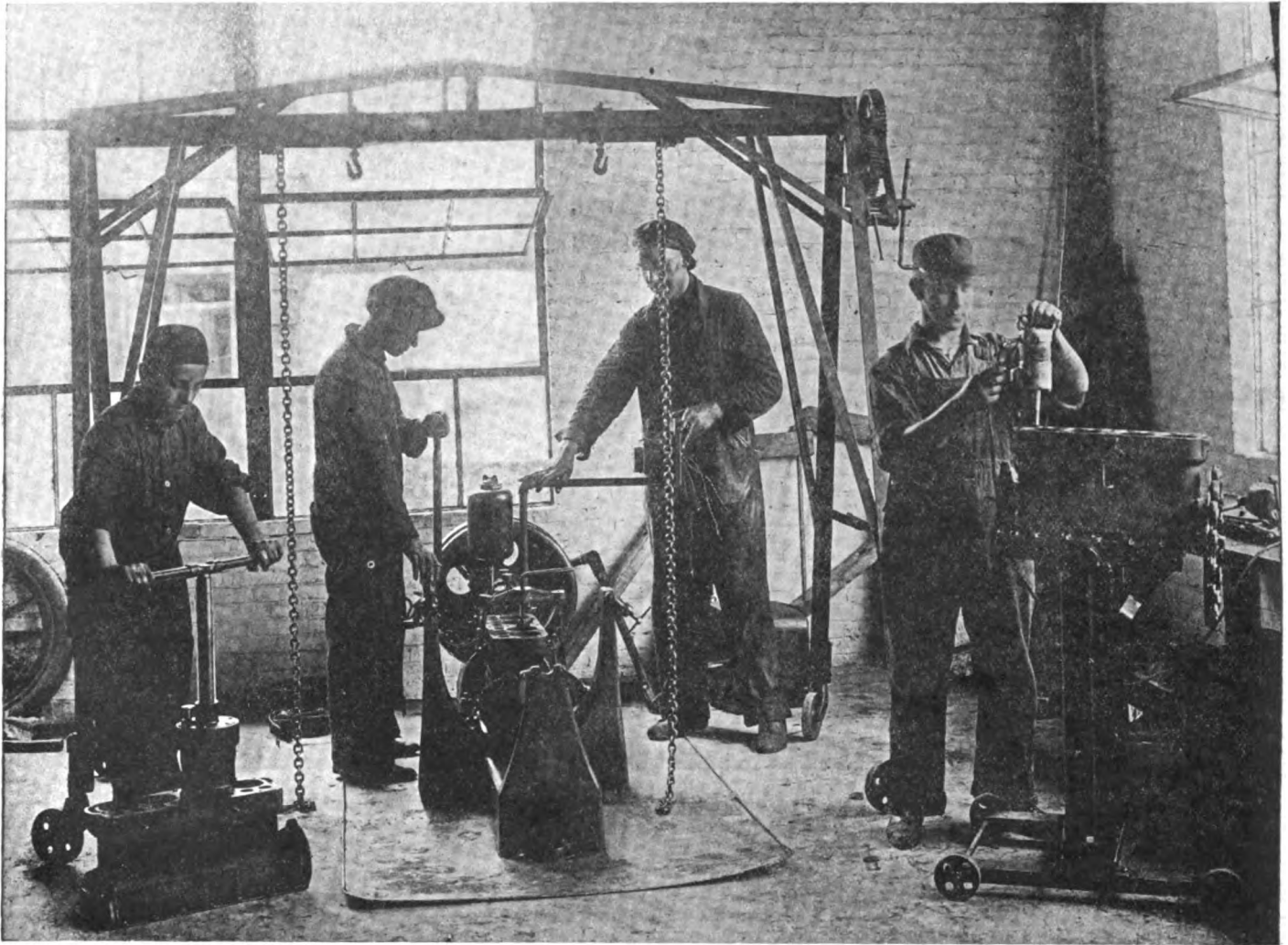


Fig. 7—General layout of the three floors



*Some of the labor saving devices. Here are seen a cylinder reborer, bearing-burning-in machine, lifting crane and electric valve grinder*

He prospered. He spent his money in good equipment. He bought every labor-saving device that he could find to help him repair Fords. The consequence was that he could do the work better, cheaper and quicker than the other concern. Then he started to sell accessories. He made money out of that and still further expanded in the shop equipment.

The old concern got peeved. They said: "Here, you can't sell accessories and do all those kind of things. You're only supposed to be a Ford repair man. If you don't stop we will refuse to extend your lease."

"All right," said Mac, but he did not say anything more at the time. He went out and got a lease on a new building with three floors, borrowed a couple of hundred dollars, and when his lease was up moved.

Difficulties in life seem to be pleasures to him. He is always smiling and always exuding energy and vim. When they told him he was not supposed to be so progressive, that he could not swipe all the old concern's business, he went out and got a place where he could be more progressive and where he could swipe more of everybody's business.

Then when everything was going

nicely and the loans paid off, he bumped full tilt into the labor shortage. He had lots of work, plenty of cars to store and



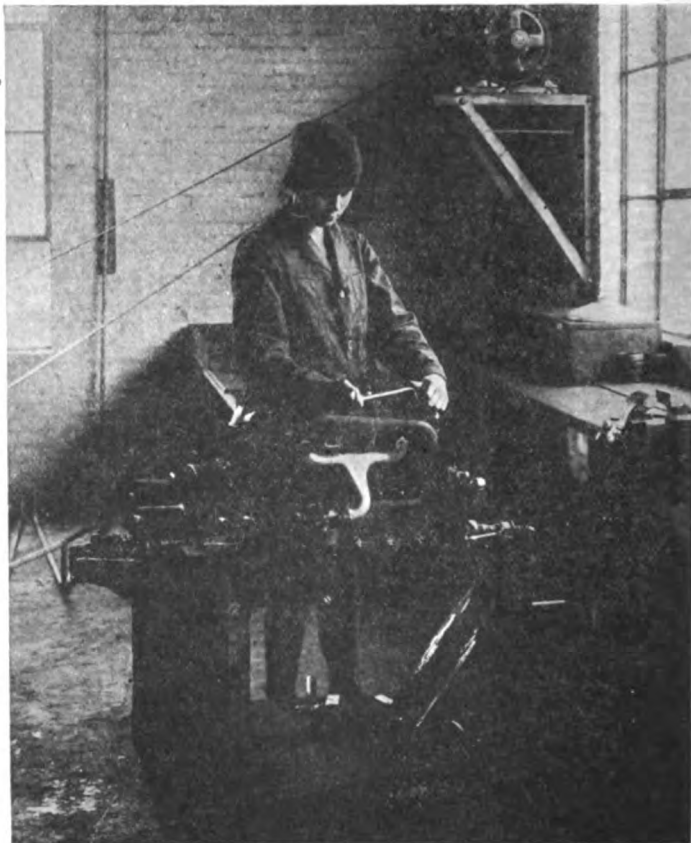
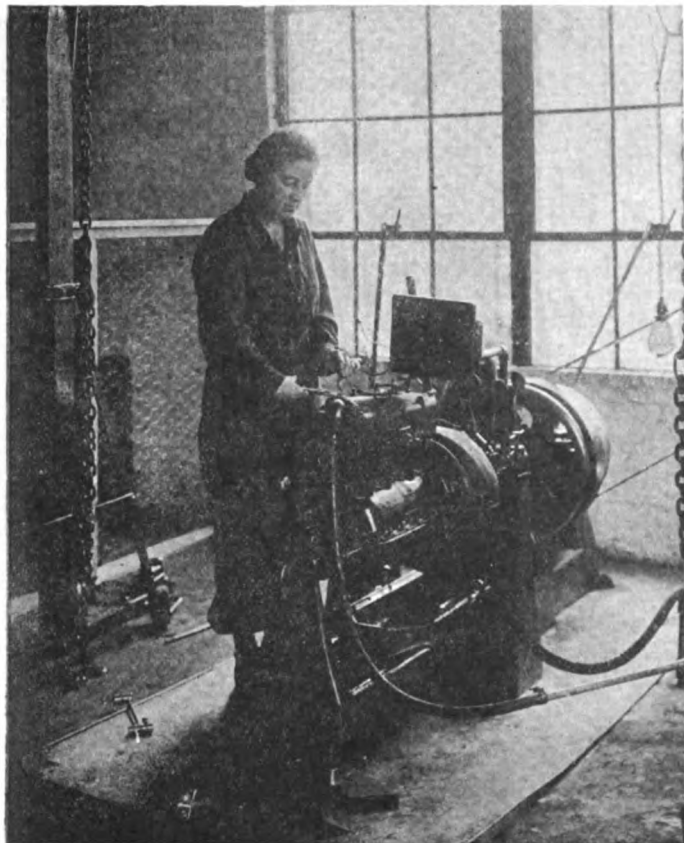
*Miss Lightner presides over the stock and tool room*

a good paying line of accessories and good sales of gasoline. There was scarcely a man to be had to do the work. What did he do? He said, "If there is no labor I will make some."

So he went out and got some girls and started a class in Ford operating and repairing. He now has seven girls in the course of becoming mechanics or acting in other capacities around the shop. At present they are not doing any mechanical work by themselves but are assisting the men, filling gasoline tanks, putting in oil, putting the cars in the stalls, operating the stock and tool rooms and other light work. As time goes on these girls will become more proficient and will be able to do more of the work that is now done by men.

There is no heavy work to be done in the garage. Jacks, chain hoists and other devices do all the lifting. This makes it possible for girls to do practically all of the work as soon as they have mastered the details of the Ford construction.

Some of the girls are employed during the daytime, and these, together with those who have not as yet learned enough, attend the classes in the evening. Mac gets out a Ford chassis and



*The girls are taught in class to perform all the tasks connected with repairing and overhauling. These girls are working under supervision, but are apt and require little looking after*

tells them about the principles of operation, and then he takes things apart and shows the girls how they are made, the right way to take them apart and the right way to put them together. Then he lets the girls do the same work one at a time. The others look on and discuss the thing meanwhile.

It is not going to take long to make good mechanics out of these girls with this kind of instruction. Girls are quick to see little details that go right over the heads of many men. There are few men mechanics that have had the advantage of a practical education like this.

Mac is not going to get stuck on the labor problem. He has solved it from his own standpoint. He pays the girls \$10 a week for two weeks and then raises them to \$12. After that their advancement is in their own hands. He is willing to do anything for any of the girls who are hard workers and who show a desire to learn, but he proposes to stand no monkey business, and if they do not show aptitude and a desire to advance they will be dropped. He has a big waiting list.

#### Stock Parts and Tools

The stock parts and tools are kept in a wire cage presided over by a girl. No tool can leave the cage until the mechanic has left a metal check with his number on it, which is hung on a nail where the tool belongs. Every tool has a certain place in the cage, and after the girl has learned the places of the different things it does not take her long to locate any tool that may be desired.

A complete stock of standard Ford parts is kept, and these are arranged in a logical way so that all the rear-axle parts are together, all the engine parts in one place and so on. No stock is issued until it has been charged to the job. This stops all the leaks of parts going into a job without being charged.

Oil and grease are kept in a small cage on the other side of the room from the tool and stock cage. In order for a me-

chanic to get any oil or grease he must first come to the stock cage, charge up the amount to the job and then the stock girl pulls a wire which opens the latch of the oil cage.

#### Building Arrangement

The first floor contains the office, which is partitioned off from the rest of the garage with glass sash. Behind a railing are two desks, a roll top for Mac

GARAGE STORAGE TAG	
License No. 22431, 6 No. 509	
Date Left	Date Called for
7/20/18 A. M.	9/2/18 A. M.
9:30 P. M.	8:15 P. M.
Gasoline	1 40
Oil	20
Washes	
Storage	1 50
Charges on Repair Ticket No.	
Charges on Tire Tag No.	
TOTAL 3 10	
Present this Check when calling for Car	
Claim Check No. 509	
ALL CHARGES C. O. D.	

USED CAR No. 313	
Make of Car	Ford
Motor No.	114340
Model	T
Style	Del
Traded in from	Star Laundry
Date	8/16/18
Overhauling Expense	\$76.30
SELLING PRICE	\$650
Date Sold	8/30/18
Sold to	Market Street Crossing
Condition	overhauled
Equipment	9.00 starter, dem. runs extra shoe
LEAVE THIS TAG ON CAR	

USED CAR No.	
Make of Car	
Motor No.	
Model	
Style	
Traded in from	
Price Allowed	
Date	
Overhauling Expense	
SELLING PRICE	
Date Sold	
Sold to	
Condition	
Equipment	
FORWARD THIS PART OF TAG TO OFFICE	

*Fig. 1—Garage storage tag with claim check. Fig. 2—The tag that is tied to the used car. Fig. 3—The card that goes in the used car card file*

and a flat desk with a typewriter for the bookkeeper. She takes in the money—and all the business is cash—and it is kept in a special cash register, which records the different kinds of transactions separately. By pressing the right buttons the amounts are credited to Parts, Gasoline, Labor, Storage, Accessories or Used Cars. Segregating these items simplifies the bookkeeping and at the same time keeps a check on the cash received from the various lines of business. In the glass partition are a window and a shelf to hold the telephones so that they can be used either from the office or from outside.

The car elevator is just in back of the office and the wash rack is at the extreme rear.

## Girl Attends to Repairs

When a car comes into the garage or stops outside it is taken care of by the girl who is shown in one of the pictures, dressed in a dignified, useful and natty uniform. She finds out what is wanted, and if it is gasoline or oil, she puts it in, collects the cash and turns it over to the bookkeeper.

If repairs are wanted she makes out a repair requisition, gives the customer a claim check, gets his signature on the order and takes the car upstairs on the elevator herself.

If the car comes for storage, she makes out a storage tag, shown in Fig. 1, gives the claim check to the customer and takes the car to the third floor.

**Outgoing jobs are also handled by this girl, the car being brought down, cash collected and car delivered to the customer. The girl is polite, meets the customers with a smile, and is so resourceful**

[illegible]

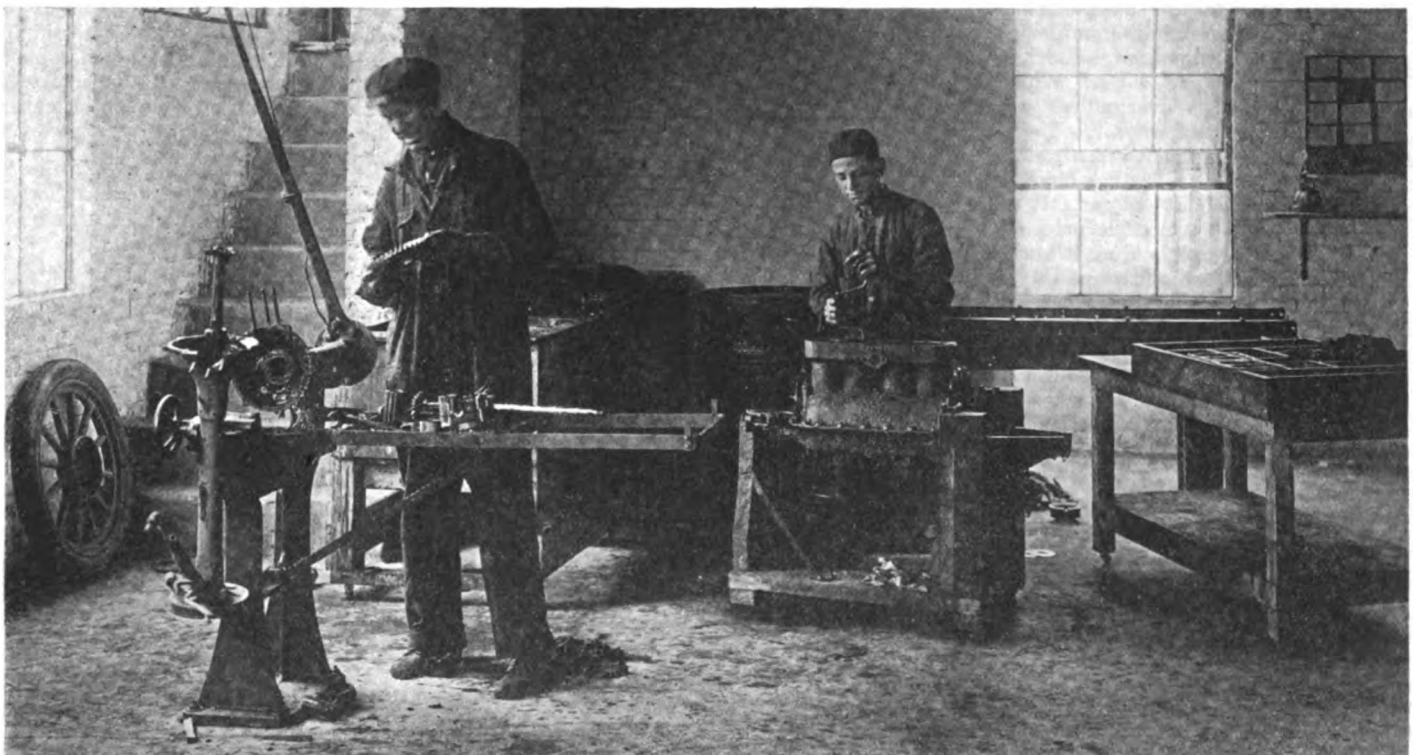
*Fig. 6—The gasoline report, which checks up the sales and indicates the supply of gasoline on hand*

that it is seldom necessary for her to call for help in carrying out her duties.

The special tool equipment of this garage is as complete as a regular Ford assembling plant. Every facility is provided for doing the work with the greatest speed and the greatest accuracy. A bearing-burning machine puts the engine bearings in much better condition than they could possibly be put by hand scraping, and the whole process takes minutes.

where the hand process takes days. Machines are at hand to test piston pin alignment, piston clamps, axle gear pullers, brake drum assembly devices for reaming and inserting bushings and many others. With these modern machines it is possible to do the work only one way, and that is the right and the quick way.

Countless small tools are provided, including all the standard Ford shop



*At the left is a rear-axle stand, in the center an engine stand and at the right a parts table with bins in which all the parts of one car are placed and left there till the car is assembled*





Miss Hall winding up the gas



Miss Drawbar takes in the cash and keeps the books

wrenches and a large variety of speed-up wrenches and jew wrenches. An electric valve-grinding machine speeds up valve work and does it better than hand work.

This equipment, while it has cost considerable money, allows a smaller force to get out a greater amount of work, and so not only helps to minimize the labor situation, but also cuts down expenses of all kinds, allows a low price to be made on the work and allows a larger margin of profit.

#### Used Cars

Mac does considerable used car business and makes more than enough profit on it to pay all expenses besides the profit from the repair work. When a car is taken in it is overhauled unless it is obviously in good repair. The tag shown in Fig. 2 is tied to the radiator cab, and tells the prospective buyer all he needs to know about the car. It tells where the car came from, the price, how much was spent in overhauling it and the actual condition. A duplicate of this tag in card form is filed in the office. This card is shown in Fig. 3, and is "Library size," 3 x 5 in. These cards are kept in a box by themselves, the unsold cards being kept separate from the sold cards.

#### Shop Records

Simple records are kept in all the departments so that the proprietor can tell at any time how things are going. Every job has its ticket so that a glance will tell whether too much time is being spent on certain operations. Every man has his time ticket showing what he has been doing on any day. Records are kept of the stock so that low stock will be automatically caught and replenished.

The gasoline report (Fig. 6) is interesting. It shows for each day the amount of gasoline sold, which should agree with the total on the cash register, the

amount in the tank at the start of business, the amount put in from the tank wagon and the amount remaining at the end of the day. One part of the report is for recording gasoline used in the garage.

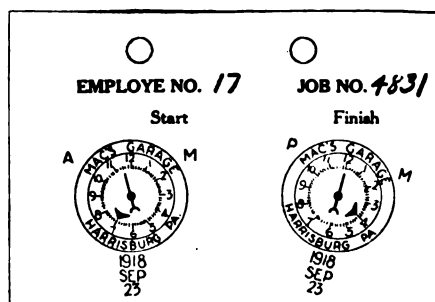


Fig. 4—Each job has a time ticket

DAILY TIME TICKET				
Employee's No. <u>4831</u>		Date <u>Sept 23</u> 191 <u>8</u>		
Employee's Name <u>George Davis</u>				
Job No.	DESCRIPTION OF WORK	HOURS	RATE	AMOUNT
4831	Overhaul engine	8	38	4 64
4836	Grind valves	1	58	58
				5 22
ENTERED PAY ROLL <u>J.D.</u>		TIME AND JOB NOS. CORRECT <u>a.g.m.</u>		
ENTERED REPAIR ORDER <u>J.D.</u>		Foreman		

Fig. 5—Each employee has a daily time ticket

When Mac moved to his new quarters, he decided to go on a strictly cash basis in spite of many predictions of failure. It has worked out so well that he would never consider going back to the old credit basis, no matter what the inducement.

It means that he has not lost a cent's worth of business, that he gets the money for all the work and materials that he furnishes, and it also simplifies his bookkeeping until his set of books are nothing more than a 6-column balance sheet with a column of figures for each class of commodity sold and another column for money going out.

He has only three accounts that are not for cash, and these are concerns such as the gasoline company, to whom he always owes more than they owe him, as the accounts are settled weekly.

His prices for labor are based on the standard Ford charges which have been in effect for several years, and, in spite of war conditions and high prices, he is able to make a good substantial profit by raising these rates 15 per cent, and the old rates were peace-time rates.

#### Mac Is Strong for Motor World

Last but not least Mac is an ardent Motor World reader. One big event each week is the arrival of his friend in the red cover. He gets lots of information out of it. He reads all about the new automotive equipment and stocks what he thinks there will be a demand for. He follows the trends of the times.

He says the idea of using girls in his business was suggested by Motor World. It occupies a prominent place in the garage office and he wants all his employees to read it and study it and thus keep up with developments in the field.

He has followed the suggestions contained in the pages about taking on automotive equipment, and he is now getting on a war basis and doing as much commercial work as possible. He expects to take on tractor work as soon as he can spare the necessary amount of money from his other work.

# A Department of BETTER MECHANICS

No. 85

## Screw-Thread Practice in the Repairshop

BY J. HOWARD PILE

**S**CREW threads are used in some form or other in so many parts of cars, trucks and tractors that the repairshop should be equipped to make repairs on all kinds of threads in general automobile use and be able to cut new threads when necessary. The different kinds of threads used are:

- 1—U. S. Std. (United States standard).
- 2—S. A. E. (Society of Automotive Engineers standard).
- 3—Pipe threads (Briggs standard).
- 4—Machine screw standard.
- 5—Metric (used largely on Italian cars).
- 6—Stove bolt standard.

Each of these threads differs from the others in pitch, diameter or form. Any one of these threads may be right or left-hand, but the right-hand thread is the standard and the left-hand thread is used only when necessity requires it (such as on the wheel nuts on the left side of the car or truck).

### Tapping

In tapping it is absolutely necessary to have the drilled hole the correct size and to tap the hole straight. The thread tables accompanying this article give the correct drill sizes to use with the different standards. In most cases these sizes are not the exact root diameters of the threads, but are the nearest sixty-fourth inch over the size, so that the tap will enter the hole without difficulty, and yet there will be at least 75 per cent bearing surface on the thread, which is sufficient.

In tapping very small holes no lubricant is necessary unless the material should happen to be very tough steel. Cast iron needs no lubricant under any circumstances, and brass will generally cut better without it than with it. If a lubricant is necessary use lard oil or one of the preparations specially prepared for the purpose. Lubricating oil is absolutely useless in thread cutting, as it interferes with the cutting.

There are three forms of taps—taper, plug and bottoming. For general all-around work the plug tap will answer the purpose, as the bottom is tapered sufficiently to enter the hole and the taper is so short that there are enough full threads on the upper part of the

tap for general use. The bottoming tap is used to follow the plug tap where it is desired to cut a perfect thread clear to the bottom of a hole. In order to do this the tap must be removed several times to clear the chips out of the hole so that the tap will go "home."

Taps for S. A. E. and U. S. Std. threads have a center hole at the top and bottom, the bottom being flat otherwise. These centers were put there by the manufacturer to center the tap in the machine when the threads were cut on the tap and they are bound to be correct. Good use can be made of the top center to insure tapping the hole straight.

If the work has been drilled on the drill press, then without removing the work from the table, and after the hole has been drilled—

1—Remove the drill and the chuck, if one was used.

2—Place a lathe center in the drill-press spindle.

3—Set the tap in place in the top of the hole.

4—Lower the spindle till the lathe center goes into the center hole of the tap.

5—Turn the tap with a solid wrench, lowering the spindle as the tap goes down so that the lathe center is always bearing against the tap, but with very slight pressure.

6—When the hole is tapped deep enough raise the spindle and turn the tap out.

By following this method it is certain that the hole will be tapped exactly straight and in line with the hole.

When tapping holes with a tap and tap wrench, it is sometimes difficult to start the tap, or perhaps after the first thread is started the tap is found to be out of line. If a taper tap is available this will obviate the difficulty. The lower part of the taper tap is slightly smaller than the hole and, in addition to making it easier to start, the lower part gives a bearing which makes it easy to start the thread straight.

Regular tap wrenches are the best to use on all taps above  $\frac{1}{4}$  in., as the two long handles give sufficient purchase to force the taps straight in case it runs off. For small taps a T-handle wrench with a three-jaw chuck is most convenient and is not so heavy in comparison with the size of the tap. For inaccessible places solid end wrenches may be used.

Machine screw taps and stove-bolt taps have a pointed bottom, as shown in Fig. 3. They can be easily identified in this way and not confused with other standard thread taps.

Outside thread cutting is done either with dies or on a lathe. For all ordinary bolt and rod work a die answers the purpose, and this is the kind of work that the repairshop is most called on to do. Long threads are better cut on a lathe, as a die has a tendency to run off to one side and cut a thread on a slant. In such a case the thread will be cut way below the surface of the rod on one side, while on the opposite side the threads will not be cut full. This situation can be obviated if the die is supplied with a guide

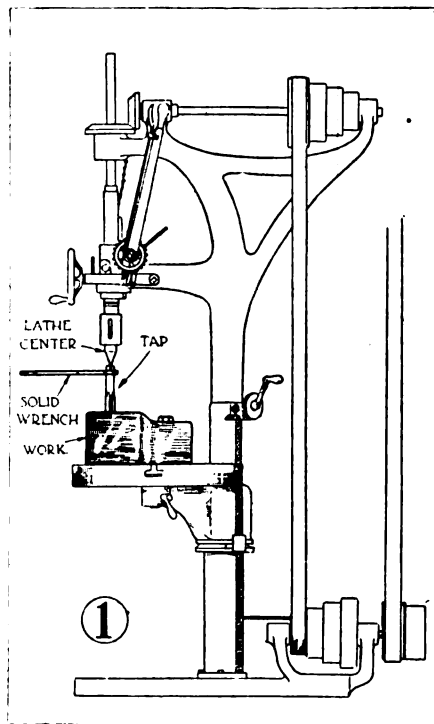


Fig. 1—A lathe center held in the drill spindle holds the tap true

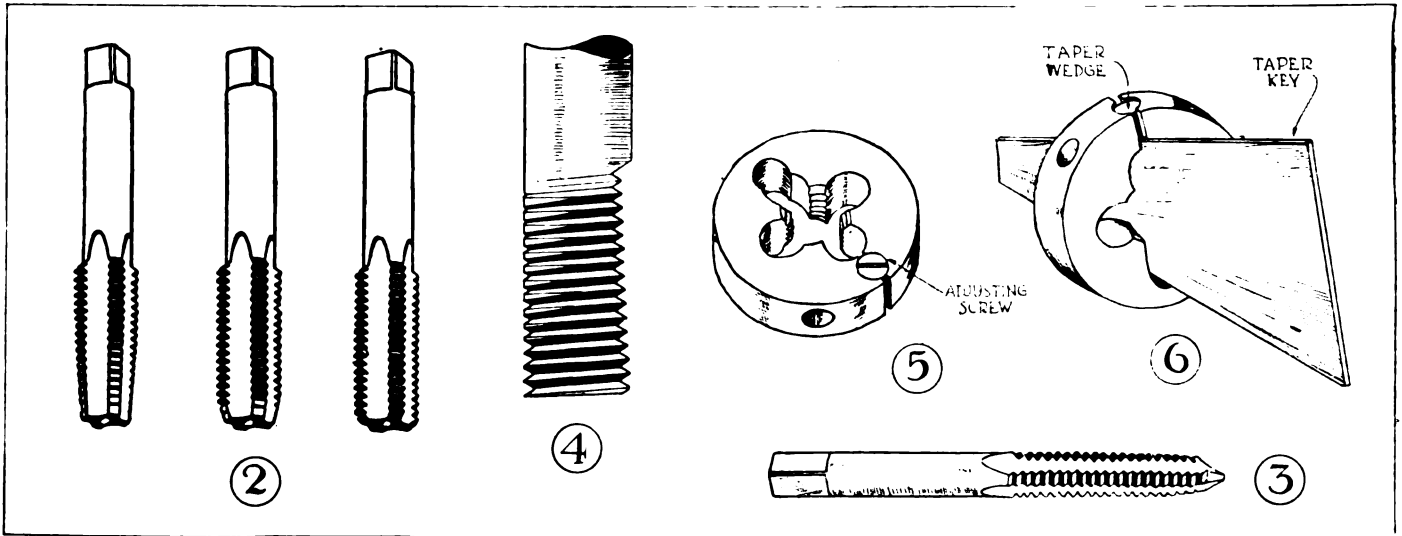


Fig. 2—Taper tap to the left, plug tap in the center, bottoming tap to the right. Fig. 3—Machine-screw and stove-bolt taps have pointed ends. Fig. 4—Results of the die running out of line. Fig. 5—Screw-adjusted die. Fig. 6—Wedge-adjusted die

or collet, provided the collet fits the work pretty closely.

Dies, with the exception of the solid variety, are adjustable within narrow limits, so that a die that is worn can be brought back to standard, or a thread a little above or below standard can be cut if required. For general work, however, it is best not to change the die adjustment, which is set to standard at the factory. The adjustment may be either with a screw, as shown in Fig. 5, or it may be a wedge, as shown in Fig. 6. The wedge is forced outward with a piece of thin tapered metal to make the die smaller. It can be driven in with a nail set. Round dies are held in die holders and are kept from turning with a screw, the point of which goes into a bevel in the side of the die. Square dies are held in square holders and need no stop to keep them from turning, but they are usually kept from falling out of the stock with some sort of screw.

#### Pipe Dies

Pipe dies are in sets, typical sets cutting threads of these sizes:

Small set,  $\frac{1}{4}$ ,  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1 in.

Large set,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$ , 2 in.

These two sets cover almost the entire range of work that the repairshop is called on to do, with the exception of the  $\frac{1}{8}$  in. size, and it is easier to work a solid square die for this size than the regular adjustable kind. Collets or guides are provided for each size pipe, and two half-dies are also used for each size. These are in the form of flat plates held to the stock with square-head screws and adjusted with screws on each end. To cut a standard thread, the standard marks should be in line on each half die. The correct position is shown in Fig. 7. If the dies are worn or if a smaller or larger thread is desired, the dies will be placed a little different, according to what is wanted, but in any case the difference between the two marks should be equal on each side.

Sizes 1 in. and below can be easily cut down to standard with one bite, but pipe

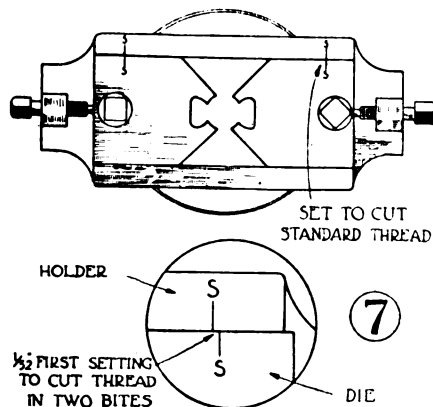


Fig. 7—Standard-size marks on a pipe die. When the marks coincide, the thread will be standard

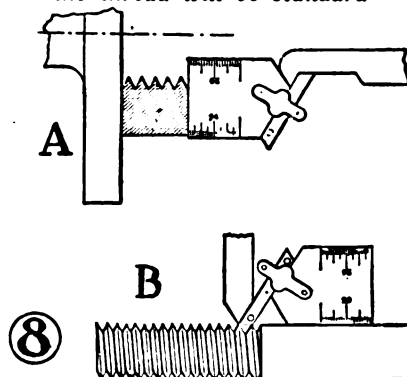


Fig. 8—Gage for threading tools. A shows its use on an inside tool and B on an outside tool.

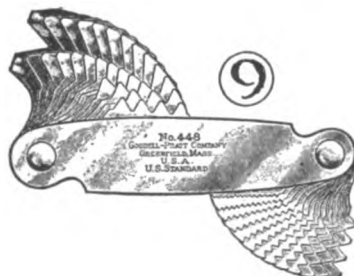


Fig. 9—A thread gage is a valuable help in determining the pitch

above this size can more easily be cut if the work is done in two cuts, putting the dies a little outside of standard the first cut and bringing them in line for the second cut.

A standard length thread is cut when the die is on the pipe far enough so that the end of the pipe just comes through with about one-half thread sticking out.

#### Cutting Threads on the Lathe

For outside threads a straight diamond-point tool is used, the point of which is ground on the emery wheel to the exact angle of the thread and with the point flattened the required amount for the flat. The tool must be tested with some kind of a gage for correct angles and with a scale for the flat. Fig. 8 shows such a gage in use. At B it is shown used to line up the tool correctly on the tool post. This insures both sides of the tool cutting an equal angle so that the thread will be true.

The amount of lead to give the slide rest so that the pitch of the thread will be right is taken care of by the gears in the lathe. If the lathe is a modern quick-change-gear model the proper lead will be indicated on the gearbox. The old model lathes in which the gears have to be taken off to change the lead have a brass plate on the end showing which combination of gears to use to get the right feed.

For very accurate work the job is finished up in the lathe in two or three cuts and left a trifle oversize, then the tail-stock is run back and a die is chased over the threads to bring them to exact size and form. When chasing with a die the lathe should be turned by hand, by pulling the belt, rather than by power.

Inside thread cutting is done with an inside threading tool ground in just the same way as the tool for outside work, but the point of the tool is at right angles to the body. As the tool cannot usually be placed as far back in the tool post as the outside tool, it is better to take the thread down in several cuts, leaving it a trifle small and finishing it up with a tap, the top center hole of which is

S. A. E. Threads			Metric Threads		
Diameter	Threads per Inch	Tap Drill Size	Diameter	Pitch	Root Diameter (Millimeters)
$\frac{1}{8}$	28	$\frac{1}{16}$	3	.5	2.35
$\frac{1}{4}$	24	$\frac{1}{8}$	4	.75	3.03
$\frac{3}{8}$	24	$\frac{1}{4}$	5	.75	4.03
$\frac{1}{2}$	20	$\frac{3}{8}$	6	1.0	4.70
$\frac{5}{8}$	18	$\frac{1}{2}$	7	1.0	5.70
$\frac{3}{4}$	18	$\frac{5}{8}$	8	1.0	6.70
$\frac{7}{8}$	16	$\frac{3}{4}$	8	1.25	6.38
$1\frac{1}{8}$	16	$\frac{7}{8}$	9	1.0	7.70
$1\frac{1}{4}$	14	$1\frac{1}{8}$	9	1.25	7.38
$1\frac{3}{8}$	14	$1\frac{1}{4}$	10	1.5	8.05
$1\frac{1}{2}$	12	$1\frac{3}{8}$	11	1.5	9.05
$1\frac{3}{4}$	12	$1\frac{1}{2}$	12	1.5	10.05
$2\frac{1}{8}$	12	$1\frac{3}{4}$	12	1.75	9.73
$2\frac{1}{4}$	12	$2\frac{1}{8}$	14	2.0	11.40
$2\frac{3}{8}$	12	$2\frac{1}{4}$	16	2.0	13.40
$2\frac{1}{2}$	12	$2\frac{3}{8}$	18	2.5	14.75
$3\frac{1}{8}$	12	$3\frac{1}{8}$	20	2.5	16.75
$3\frac{1}{4}$	12	$3\frac{1}{4}$	22	2.5	18.75
$3\frac{3}{8}$	12	$3\frac{3}{8}$	22	3.0	18.10
$3\frac{1}{2}$	12	$3\frac{1}{2}$	24	3.0	20.10
$4\frac{1}{8}$	12	$4\frac{1}{8}$	26	3.0	22.10
$4\frac{1}{4}$	12	$4\frac{1}{4}$	27	3.0	23.10
$4\frac{3}{8}$	12	$4\frac{3}{8}$	28	3.0	24.10
$4\frac{1}{2}$	12	$4\frac{1}{2}$	30	3.5	25.45

Diameter	Coarse	Fine
$1\frac{1}{8}$	12	16
$1\frac{1}{4}$	12	16
$1\frac{3}{8}$	12	16
$1\frac{1}{2}$	12	16
$1\frac{3}{4}$	12	16
$2\frac{1}{8}$	12	16
$2\frac{1}{4}$	12	16
$2\frac{3}{8}$	12	16
$2\frac{1}{2}$	12	16
$2\frac{5}{8}$	12	16
$2\frac{3}{4}$	12	16
$2\frac{7}{8}$	12	16
$3\frac{1}{8}$	12	16
$3\frac{1}{4}$	10	16

Above  $1\frac{1}{2}$  in. the S. A. E. threads have two pitches, coarse and fine.

guided by the tailstock center. Gaging the tool is shown at A, Fig. 8.

#### Thread Varieties

The U. S. Std. thread is used for all bolts, nuts, cap screws, set screws, etc., that are not S. A. E. threads. Its thread is somewhat coarse for many purposes about a car, especially where the metal through which the thread is cut is thin or where a greater leverage is required. The U. S. Std. would allow only a few threads in a thin piece of metal, whereas the S. A. E. thread, with its finer pitch, would allow more. From the fact that it is a finer pitch it pulls tighter, with the same amount of effort, than the U. S. Std. The U. S. Std. thread is of V-form, with the tops of the V cut off and the bottom filled flat for one-eighth of the pitch. The angle of the V is 60 deg.

The S. A. E. thread has the same form as the U. S. Std.—that is, V-form with flat top and bottom. This is the same thread that was formerly known as the A. L. A. M., when the automobile standards were in the hands of the Association of Licensed Automobile Manufacturers. With the taking over of these standards by the S. A. E. some minor changes were made and some larger size standards added, but in the main they are the same. Many tap and die catalogs and hardware catalogs still adhere to the old name. The accompanying table gives the standard sizes up to 3 in. From 3 to 5  $\frac{1}{2}$  in. the coarse pitch is 10 and the fine pitch 16. Standard sizes run by eighths. Sizes of 6 in. and over take a coarse pitch of 8 and a fine pitch of 16.

Pipe threads in this country are commonly known as "iron pipe sizes." The technical name is Briggs standard. Pipe sizes in England are known as the Whit-

Iron Pipe Threads (Briggs)			Pipe Specifications				
Size	Threads per Inch	Tap Drill Size	Size	Inside Diameter	Outside Diameter	Length of Thread	Distance Pipe Screws Into Fitting
$\frac{1}{8}$	27	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{13}{32}$	$\frac{1}{2}$	$\frac{1}{4}$
$\frac{1}{4}$	18	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{11}{16}$	$\frac{1}{2}$	$\frac{1}{4}$
$\frac{3}{8}$	18	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{11}{16}$	$\frac{1}{2}$	$\frac{1}{4}$
$\frac{1}{2}$	14	$\frac{11}{16}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{11}{16}$	$\frac{1}{2}$	$\frac{1}{4}$
$\frac{5}{8}$	14	$\frac{13}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{11}{16}$	$\frac{1}{2}$	$\frac{1}{4}$
1	11 $\frac{1}{2}$	$1\frac{1}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{4}$
$1\frac{1}{8}$	11 $\frac{1}{2}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{4}$
$1\frac{1}{4}$	11 $\frac{1}{2}$	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{4}$
2	11 $\frac{1}{2}$	$2\frac{1}{8}$	2	$2\frac{1}{8}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{4}$
$2\frac{1}{8}$	8	$2\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{4}$
3	8	$3\frac{1}{8}$	3	$3\frac{1}{8}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$\frac{1}{4}$
$3\frac{1}{8}$	8	$3\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$\frac{1}{4}$
4	8	$4\frac{1}{8}$	4	$4\frac{1}{8}$	$4\frac{1}{2}$	$4\frac{1}{2}$	$\frac{1}{4}$

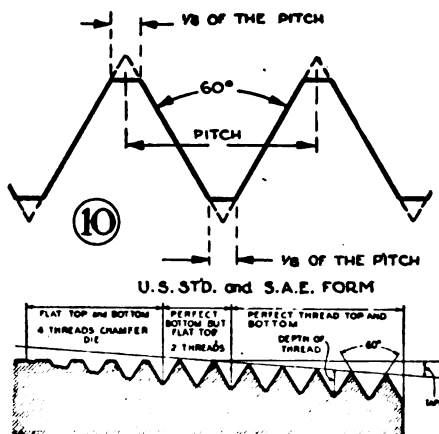


Fig. 10—At the top is the graphic formula for U. S. Std. and S. A. E. threads. Below is a section of a pipe thread

worth standard and differ from the Briggs. The threads are tapered so that when the male thread is screwed into the female thread the threads will set up tight to prevent leakage. The taper of the thread is  $\frac{1}{8}$  in. per foot. Pipe is not the actual size that its name would indicate, the actual inside diameter being somewhat larger. A piece of  $\frac{1}{4}$  in. pipe is actually about  $\frac{1}{8}$  in. inside diameter and over  $\frac{1}{2}$  in. outside diameter.

The machine screw standard has the same form of threads as the U. S. Std. The sizes run by numbers instead of being expressed in fractions of an inch. The table gives the approximate diameter in fractional parts of an inch.

Metric threads have the same form as the U. S. Std., but the diameter and pitch are expressed in metric measure. These threads cannot be cut on a lathe that is not provided with a metric screw. Work can, however, be done with taps and dies.

#### Conservation Program for Bicycle Manufacturers

WASHINGTON, Oct. 3—Bicycle manufacturers will conserve about 2500 tons of steel by observing a conservation program effective Oct. 1, and outlined as a result of conferences between the manufacturers and the War Industries Board. In addition to saving this steel, which is one-third of the quantity consumed by the industry in the last 12

U. S. Standard Threads			Machine Screw Sizes			
Diameter	Threads per Inch	Tap Drill Size	Number	Threads per Inch	Tap Drill Number	Approximate Outside Diameter
$\frac{1}{8}$	20	$\frac{1}{16}$	4	48	42	$\frac{1}{8}$
$\frac{1}{4}$	18	$\frac{1}{8}$	5	44	37	$\frac{1}{4}$
$\frac{3}{8}$	16	$\frac{1}{4}$	6	40	32	$\frac{3}{8}$
$\frac{1}{2}$	14	$\frac{3}{8}$	7	36	30	$\frac{1}{2}$
$\frac{5}{8}$	13	$\frac{1}{2}$	8	36	28	$\frac{5}{8}$
$\frac{3}{4}$	12	$\frac{5}{8}$	9	32	26	$\frac{3}{4}$
$\frac{7}{8}$	11	$\frac{3}{4}$	10	30	21	$\frac{7}{8}$
$1\frac{1}{8}$	11	$1\frac{1}{8}$	12	28	14	$1\frac{1}{8}$
$1\frac{1}{4}$	10	$1\frac{1}{4}$	14	24	16	$1\frac{1}{4}$
$1\frac{1}{2}$	10	$1\frac{1}{2}$	16	22	1	$1\frac{1}{2}$
$1\frac{3}{8}$	9	$1\frac{3}{8}$	18	20	$\frac{1}{2}$ in.	$1\frac{3}{8}$
$1\frac{1}{2}$	9	$1\frac{1}{2}$	20	20	$\frac{3}{4}$ in.	$1\frac{1}{2}$
$1\frac{3}{4}$	8	$1\frac{3}{4}$	22	18	$\frac{1}{2}$ in.	$1\frac{3}{4}$
$2\frac{1}{8}$	8	$2\frac{1}{8}$	24	16	$\frac{1}{2}$ in.	$2\frac{1}{8}$

Stove-Bolt Threads	
Diameter	Threads per Inch
$\frac{1}{2}$	28
$\frac{3}{8}$	24
$\frac{1}{4}$	22
$\frac{3}{16}$	18
$\frac{1}{8}$	16

months, there will be additional savings of other materials, production will be simplified and capital tied up in stocks will be released. The results are to be secured through a substantial reduction in the numbers of types and models of bicycles, saddles, handlebars, rims, tires, sprockets, pedals, etc. The manufacturers will discontinue wherever possible the use of metal, rubber and leather. Partly fabricated materials can be continued for production provided no bicycles are made later than Dec. 31, 1918, other than those provided in the new program.

Rim manufacture will be confined to one clinch type, 28 x 1  $\frac{9}{16}$ , one single tube type 28 x 1  $\frac{7}{16}$ .

Tires will be confined to one clinch type in two sizes, either 28 x 1  $\frac{1}{2}$  or 28 x 1  $\frac{1}{4}$ , one single tube type 28 x 1  $\frac{1}{2}$  or 28 x 1  $\frac{1}{4}$ . Manufacturers may use the different markings, treads, etc., which are provided by the rubber tire manufacturers in accordance with their conservation schedule.

#### Western to Make Own Trailers

KANSAS CITY, Oct. 4—The Western Trailer Co., of which C. J. Welch is president, will take up the manufacture of a line of trailers. The company heretofore has been Western distributor of Fruehauf trailers, but hereafter will make its own. It is planned to produce a body for every line, including flare-board, stake, enclosed, canopy top, etc. The company is erecting a four-story building, 60 x 150 ft., and will be in production within 90 days.

#### Dealers' Meeting Postponed

LIMA, OHIO, Oct. 4—On account of the death of Harry Willower, sales manager of the Gramm-Bernstein Motor Truck Co., the big meeting of dealers which was planned has been postponed. No definite date has been set.



# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1555—REPAIRMAN'S CREEPER

A light substantial creeper is made from sugar-barrel staves which are used for both slats and cross pieces. This design makes the creeper concave both crosswise and lengthwise. The two middle slats extend 8 in. further out at one end than the other staves, and an old inner tube is folded up in a bundle and fastened to this projection to make a headrest.—H. W. Pelton, Pelton's Garage, Lake Helen, Fla.

## No. 1556—OXYGEN TANK BATTERY

Enough pressure from oxygen tanks to run several hours can be secured from tanks that are low by connecting several of them up in the form of a battery. The offsets are brazed onto a piece of pipe and the pipe fitted with a valve between the tanks and the burner.—O. L. Siler, Siler Welding & Machine Co., Garden City, Kan.

## No. 1557—ASSEMBLING FORD UNIVERSAL TO TRANSMISSION

The male knuckle of the Ford universal is easily entered in the square hole in the rear end of the transmission by using a jack under the rear axle. This makes the operation easy for one mechanic. The complete rear assembly, including the wheels, is rolled under the car and the universal joint is allowed to rest in the end of the transmission housing into which it has to enter. A jack is put under the center of the differential case at a slight angle and the whole assembly raised clear of the floor a few inches. By turning the universal joint with a pair of pliers it will jump into the hole when it comes to the right position on account of the forward push of the inclined jack.—H. W. Pelton, Pelton's Garage, Lake Helen, Fla.

## No. 1558—REMOVING BUICK VALVE CAGES

Buick valve cages are removed by inserting a piece of heavy spring leaf on each side at the bottom of the spring, resting these leaves on two large nuts and prying up. This will bring out the whole cage assembly. If the assembly sticks, some kerosene poured around the joint and left to soak will loosen it up.—H. W. Pelton, Pelton's Garage, Lake Helen, Fla.

## No. 1559—VALVE-PIN PLIERS

A pair of pliers for inserting valve pins in the holes of the valve stems is made by heating and drawing out the noses of a pair of flat-nose pliers to a

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

*1—Describe the shortcut briefly but clearly, in few words.*

*2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.*

*3—Write on ONE side of the paper only.*

*4—Sign your name and initials, the name of the company you are with, and the town.*

*Write plainly. If your name is unusual, print it in capital letters.*

point. This point is then bent around in a curve, making the bend  $\frac{1}{2}$  in. from the point. A hole the size of the valve pin or a trifle smaller is drilled on the line between the jaws so that half of the hole will be in each jaw.—George E. Bisson, Kittery Point, Me.

## No. 1560—CYLINDER-BORE GAGE

A cylinder-bore gage is made by cutting a piece of  $\frac{1}{4}$  or  $\frac{5}{16}$ -in. rod a little longer than the diameter of the cylinder to be gaged and grinding both ends to a round point. The end is then filed back till the exact bore is reached. This becomes a set gage.—Roy W. Brinsden, Auckland, New Zealand.

## No. 1561—INSERTING A SPINDLE-ARM BUSHING

The spindle-arm bushing is easily inserted in the spindle arm without marring it by drawing it in with a bolt, nut and washer. A wrench is used on each end so that the head will not turn.—G. A. Murray, State Line Motor Co., Waverly, N. Y.

## No. 1562—RACK FOR RODS, PIPE AND STRIPS

This rack for lengths of rod, pipe, etc., is made of 1-in. pipe, fittings and pieces of timber. Six pieces are cut 2 ft. 6 in., six pieces 3 ft. and four pieces 1 ft. The wooden cross pieces which support the material to be stored in the rack are drilled the size of the pipe at each end and made the desired length. The bases are made of wider timber so that they will not fall over. The couplings keep the cross pieces from sliding down on the pipes.—Roy W. Brinsden, Auckland, New Zealand.

## No. 1563—CUTTING KEYWAYS WITHOUT A SLOTTER

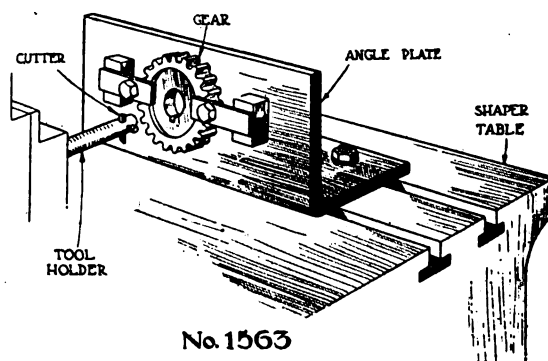
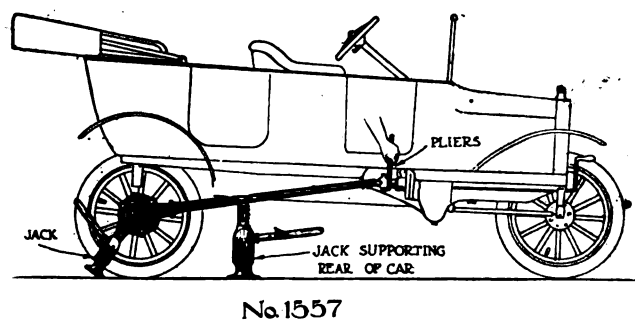
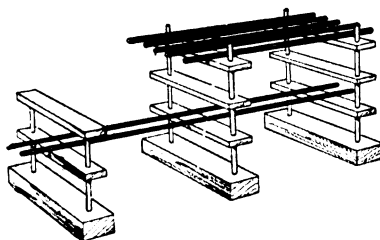
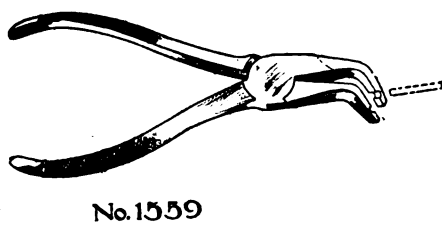
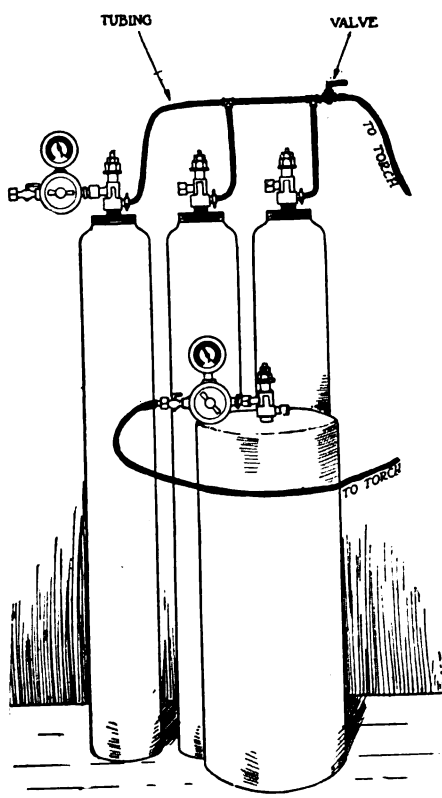
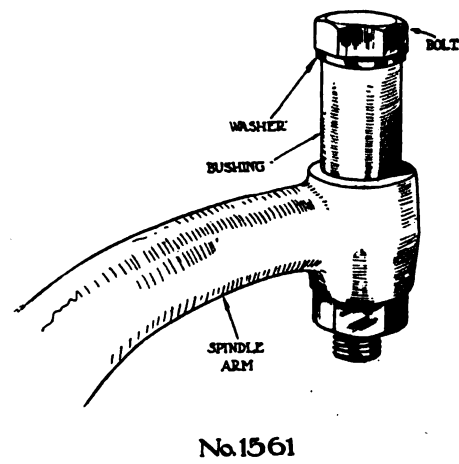
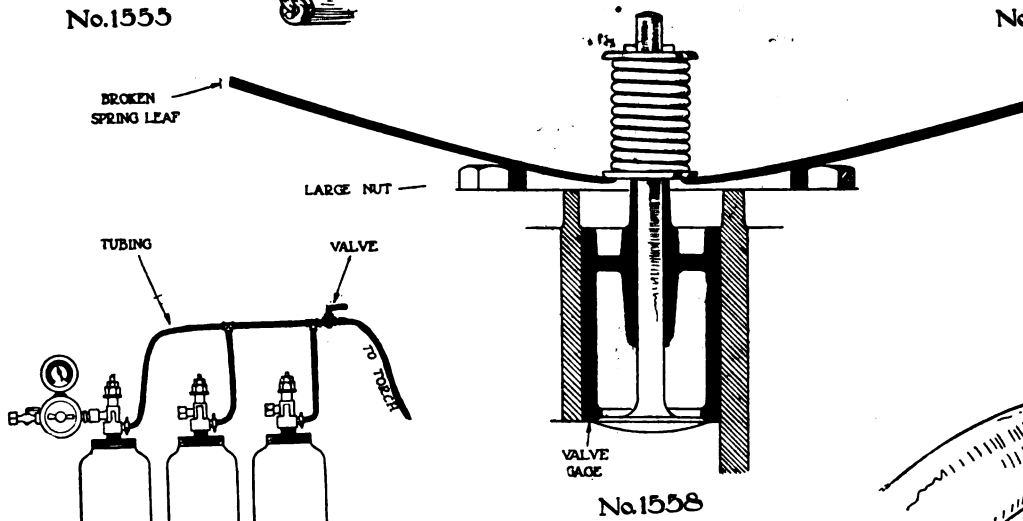
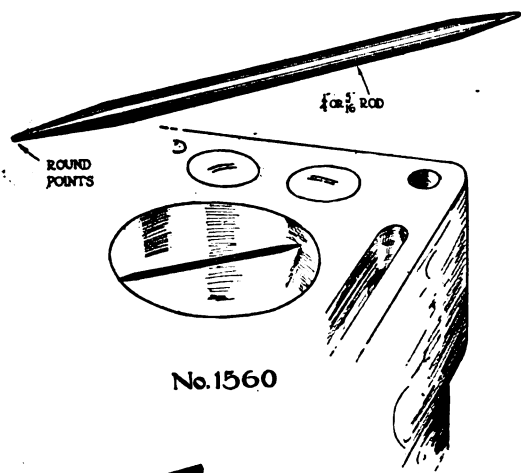
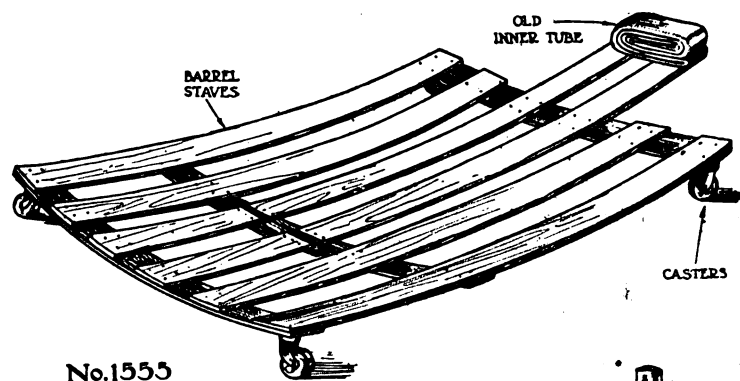
When a slotter is not available, keyways are cut in a gear or cam by using a shaper. The work is securely clamped to an angle plate which has a hole bored through the center big enough to clear the tool and tool-holder. The bottom of the angle plate is clamped to the shaper table and the tool run down cautiously as the cut proceeds.—Roy W. Brinsden, Auckland, New Zealand.

## Interurban Food Trucks Considered Essential

WASHINGTON, Oct. 4—Motor trucks used to relieve railroad congestion by interurban transportation of food and other essential war products will be considered as in essential work and the men employed on them will be regarded as essential by the United States Employment Service.

## Republics Go to Japan

ALMA, MICH., Oct. 4—For the period from Jan. 1 to Aug. 15 the Republic Motor Truck Co. shipped to Japan a total of 76 trucks. Preparations are now under way for a shipment of 152 trucks to reach the Pacific Coast before Oct. 15 to be forwarded by boat a few days later. All the models made by the Republic Co. will be represented in this shipment.



# Editorial Observation

## What Then?

**D**EALERS and garagemen throughout the country—north, east, south and west—must give more thought to conditions that will govern their operations when Kaiserism throws up its hands and cries “quits.”

We are not encouraging the thought that the war is over, or that it is all over but the shouting. We are not urging other than business on a successful war basis just as fast as possible.

But we do say, what all of us know to be a fact, that the war is going to end—the end may come quickly.

What then?

Will you have lost interest?

Will you have destroyed your lines of communication?

Will you have dissipated time and opportunity?

Will you have permitted your more aggressive competitor to have taken a lead that will place a damaging handicap upon desire to be in the position of

vantage that was yours before you allowed the slip of step that put you out of line?

Don't forget that essential business must be kept up. You are part of “essential business,” and your usefulness to the community can be heightened if you will embrace opportunity to become an automotive dealer in fact.

Have you taken on a truck agency?

If you are in an agricultural community have you become a tractor dealer?

Have you contracted to sell unit power and lighting systems for the farm?

Have you installed cost and accounting systems in your business?

Do you know what departments of your business are operating at a profit and what ones at a loss?

You have the answer to every question asked above. Consider every one of them. Look yourself over carefully.

The war is going to end some time.

## Be a “Business League”

**M**ANY trade associations have been paying taxes on memberships and other things, whereas many of these payments might have been unnecessary were the organizations properly rated with the collector of internal revenue.

The government recognizes certain organizations as what it calls “business leagues” and does not require them to pay the taxes that are demanded of some other types of organization.

One national trade organization was summoned to pay a tax on the tickets to its annual dinner—at about \$5 a plate—because it gave a cabaret show.

The officers of this organization went to the local collector of internal revenue, explained the status of the organization and secured recognition as a “business league,” whereupon the collector ordered the tax rescinded.

Dealer associations in some cities have been paying taxes on membership fees which might be rescinded if the organizations were properly rated. The procedure to take is to apply to the collector of internal revenue in your district, secure an affidavit form referring to cases of this kind, properly execute it and file it with the collector.

## The Banker and You

**M**AYBE you have gone to the banker recently and asked him for money and he has told you he couldn't let you have it because money is tight. Maybe he told you the truth and maybe he didn't.

A dealer who is also a banker stated to Motor World a few days ago that money is NOT tight, but that bankers are rather careful where they lend their money these days. He said the thing that determines the lending is the status of the would-be borrower and not the condition of the money market.

The dealer who can show the banker he is sound

and who is also a good moral risk should have no more difficulty now than at other times. There is more money in the country than ever, he said.

Summed up in a few words: It isn't the condition of the money market but what the banker thinks of YOU that prompts his acceptance or declination of your proffered business. Therefore, when the banker tells you he can't lend you money because the market is tight ask him what there is about you or your business that he doesn't like, because that's what he's thinking about all the time.

## Letters from Readers

**T**HIS page is for the use of *MOTOR WORLD* readers with something to say. Letters on subjects of interest to dealers, garagemen, repairmen and jobbers are always welcome.—EDITOR.

### Our Honor Roll

Editor *MOTOR WORLD*: It occurred to us that you would be interested in seeing, and perhaps publishing a picture of our Roll of Honor.

The idea of having a Roll of Honor and of sending out regularly letters each week to our men in service was suggested by our Miss Mamie Piero. The design for the Roll of Honor was originated and drawn by our C. R. Trigg and hand colored by Miss Piero. It hangs in the lobby of our office adjacent to the Service Flag.

The list of names at the present writing is considerably larger than those shown on the photograph on account of recent calls and a new Roll of Honor will be drawn to accommodate the increasing number of names.

Referring to the letters mentioned above. We delegate two or three men each week to write a letter. The letters are duplicated and sent to all soldiers formerly in our employ. This way we keep them in constant touch with what is going on in the plant and from the responses we have received the movement is very much appreciated. Yours very truly, the Berger Mfg. Co., R. M. Nicholson, Advertising Manager, Canton, O.

### Traction Demonstration

Editor *Motor World*: Enclosed you will find photograph showing our Tractor Manager, Mr. Breckenridge on the road

with a Case 9-18 tractor on a 2-ton Nash truck.

Our dealers at Paris, Ill., wanted a 9-18 tractor, and they wanted it at once. They gave us their order over the telephone about 3 p. m., and the tractor was loaded and delivered to them a distance of 75 miles at 9 a. m. the following morning.

*This is the entire story to be written, but there was much food for thought for all who saw the delivery or knew about it. It brought home to us forcefully again the wonderful utility of the truck, and its necessity under the present congested traffic conditions. The fact that we were delivering a tractor, which was needed for crop production, was of course the feature that made it tremendously interesting.*

Our dealers at Paris, the Auto Sales Co., handle both the Case tractors and Nash passenger cars and trucks.—Thorpe-Amerman Motor Co., H. A. Amerman, Urbana, Ill.

### Motor Truck Club Changes Name

NEW YORK, Oct. 5—To eliminate misunderstanding regarding its aims and objects, the Motor Truck Club of America has changed its name to Motor Truck Association of America.



*This is an honor roll that anyone might be proud of. Read how the Berger company keeps its men in service posted on home affairs*

### Harroun Directorate Re-elected

WAYNE, MICH., Oct. 5—At the annual meeting of the Harroun Motors Corp., held in Wilmington, Del., the entire directorate was re-elected, including the following: President, John Guy Monihan; vice-president, Ray Harroun; secretary-treasurer, Howard F. Lea; John J. Plath, R. Ward Macey, A. L. Harroun, L. E. Moses, F. W. Vollbrecht, George G. Worthley, L. H. Rogers, and Paul Hale Bruske.

### Ellis on War Board

DETROIT, Oct. 5—Guy W. Ellis, formerly sales manager of the Maxwell-Chalmers factory branch, has been appointed secretary of the Wayne County War Board. He is also captain of the 550th Machine Gun Co. of the Michigan State troops.

### Another Ford Plant Taken by Government

DETROIT, Oct. 7—Arrangements have been completed for the taking over by the Government of the Cincinnati plant of the Ford Motor Co. The plant will be devoted exclusively to the production of war materials.



*A dealer wanted a tractor in a hurry, so the Thorpe-Amerman company took this means of seeing that he got it in a hurry*

Buy More Bonds

The editor of this department is glad to answer questions. In sending queries, always include copies of contracts, notes, etc., to which you refer.

# THE LAW

By George F. Kaiser

As It Applies to  
Dealers  
Repairmen  
Garagemen

## New Jersey Lien Is Constitutional

The Court of Errors and Appeals of New Jersey has decided that the garageman's lien law of that state is not unconstitutional. It also holds that the fact that the law provides that a garageman not only has a lien on a motor vehicle for storage, repairs, etc., while it is in his possession, but can even retake it at any time after it has gone out of his possession, does not contravene the due process clause of the United States Constitution nor does it impair the obligation of contracts. The lien law, which is the Act of April 14, 1915, Par. 3, provides as follows:

All persons or corporations engaged in the business of keeping a garage or place for the storage, maintenance, keeping or repair of motor vehicles, and in connection therewith stores, maintains, keeps or repairs any motor vehicle or furnishes gasoline, accessories or other supplies therefor at the request or with the consent of the owner or his representative, whether such owner be a conditional vendee or a mortgagor remaining in possession or otherwise, has a lien upon such motor vehicle or any part thereof for the sum due for such storing, maintaining, keeping or repairing of such motor vehicle or for the furnishing of gasoline, accessories therefor, and may without process of law detain such motor vehicle at any time it is lawfully in his possession until such sum is paid.

Any person or corporation acquiring a lien under the provisions of sub-division one of this section shall not lose such lien by reason of allowing the motor vehicle or part or parts thereof to be removed from the control of the person or corporation having such a lien, may, without further process of the law, seize the motor vehicle or part or parts thereof wherever the same is or are found within the State of New Jersey.

All such property so held by any such garage keeper or automobile repairman shall, after the expiration of thirty days from the date of such detention, be sold at public auction upon notice of such sale being first published for the space of two weeks in some newspaper circulating in the city, borough, town, village or other municipality in which such garage or repair shop is located, also after five days' notice of such sale posted in five of the most public places in such municipality, and the proceeds of such sale shall be applied to the payment of such lien and the expenses of such sale, and the balance, if any, remaining shall be paid to the owner of such property or his representatives. If such balance be not claimed by such owner within sixty days after such sale, then the balance shall be paid over to the overseer of the poor of such municipality for the support of the poor.

In the case at issue the owner of a

motor truck sold it under a conditional bill of sale. The dealer at the request of the buyer applied tires of the value of \$427.88 to the double rear wheels of the truck. The dealer never had the truck in his possession, but he did have the wheels in his possession. Some time later the buyer defaulted under his conditional sale agreement and the party who had sold it to him took it back.

The dealer then seized it under the lien law and the original seller brought an action of replevin, to which the dealer counterclaimed for the amount of the lien. The court decided in favor of the dealer and gave him judgment for the amount of the counterclaim, saying as regards the lien law:

The statute is neither startling nor novel in so far as it enlarges or extends the right of lien to conditions not included in common law, but is in line with the natural progress of the law to meet necessities arising from new business conditions and the wisdom of this species of legislation is not a court question but is peculiarly within the province of the law-making power to decide.

## Iowa Compensation Law

Editor Motor World: As I am a subscriber to your paper, I would like you to print the Iowa law on the Workmen's Compensation Act in your paper, or, if you would, I would like to know right away, as I am on the sick list and wish to know what I can do to get what I am entitled to.—B. J. S., St. Joseph's Hospital, Omaha, Neb.

Answer—The Workmen's Compensation Law is by far too long to be printed in full here. In order for you to recover you must be incapacitated for at least two weeks. Compensation is not allowed for a disease except if it arises from the injury. If you have already not done so, I suggest that you have some adult friend serve the following written notice on your employer:

### FORM OF NOTICE.

To:  
You are hereby notified that on or about the \_\_\_\_\_ day of \_\_\_\_\_, 191\_\_\_\_, personal injury was sustained by \_\_\_\_\_ while in your employ at \_\_\_\_\_, and that compensation will be claimed therefor.

(Signed) \_\_\_\_\_

I suggest that you write to the State Industrial Commissioner at Des Moines, Iowa, and ask him to send you a copy of the law and find particulars of what you are required to do.

## When Responsibility Starts

It was decided in a recent case that a garageman is not responsible for a motor vehicle until he actually accepts custody of the same. Suit was brought by the owner of a motorcycle who claimed that his motorcycle had been stolen through the garageman's negligence. It appeared that while the owner of the motorcycle was riding along a country road he collided with a motor car and was injured. The police took charge of the motorcycle. The police chief engaged the garageman to take him to the scene of the accident in his car, and upon their arrival there requested the garageman to load the motorcycle on to his car and bring it back to his garage. The latter refused because of the weight of the motorcycle.

The next morning the garageman was again requested by the police to get the motorcycle, but upon driving to the place where the accident occurred found that it had disappeared.

The court held that the motorcyclist had no cause of action against the garageman, as the latter had never taken the motorcycle into his possession nor had he ever accepted custody of it, and therefore he was not liable as a garageman.

## Another Contract Tangle

In Oklahoma suit was recently started by a sub-dealer against a motor car manufacturer. It appeared that the sub-dealer had entered into a contract with a dealer who had previously contracted with the motor manufacturer to act as distributor, and had paid a \$120 deposit to the distributor, who went out of business without returning the deposit. The sub-dealer claimed that the distributor was an agent of the manufacturer, and on that theory sued the manufacturer for the return of his deposit.

The court decided that the distributor was not an agent of the manufacturer and referred to the contract between the manufacturer and distributor, which provided in part:

It is hereby expressly agreed and understood by and between the parties heretofore that the distributor is in no way the representative or agent of the company and has no right or authority from it to assume or create any obligation of any kind expressed or implied on its behalf or to bind it in any respect whatsoever.



# Meeting the Labor Shortage

Dealers, Garagemen and Automobile Club in Chattanooga Combine in Education of Car Owners, Prospective Soldiers, and Future Mechanics

**M**EN and women from eighteen to eighty and from all walks of life are being made acquainted with the inner workings of an automobile at the Automobile Efficiency School of the Chattanooga Automobile Club. Over 170 Chattanoogaans have been enrolled in the school and are regular attendants at the classes which are being held in the auditorium of the Chamber of Commerce every Monday and Thursday night.

The automobile course was inaugurated by the club for the two-fold purpose of giving instruction in the elementary motor mechanics to the men of draft age and members of the National Guard that they might be of higher value to the Government when they enter the army service, and to meet the growing shortage of labor in the repairshops by teaching the automobile owner and driver how to take care of his own car.

Over a hundred young men of draft age and members of the National Guard responded to the club's invitation to attend the course of lectures and practical demonstrations free. Seventy owners of cars also took advantage of the opportunity of instruction regarding their car. In this number were many patriotic citizens of wealth and prominence who never before have driven their cars but have given up their chauffeurs and intend to drive and care for their cars themselves. In the class are two men and one woman past seventy years of

age who are regular attendants at the class meetings.

The course of instruction in the school was mapped out by the automobile club committee, composed of Ernest W. Holmes, chairman; D. A. Graves, Otto Hassler, E. S. Arnold and Secretary V. D. L. Robinson, after a personal inspection was made of the methods employed in the Government military school at the University of Tennessee at Knoxville. A four-cylinder Buick car was secured from the Hardwick-Buick Co., which was completely dismantled and is now being reassembled before the classes. Where there are different types of construction these parts are also demonstrated to the classes. Copies of the set of charts used in the Government school as well as the same text books are being used.

The automobile club is receiving the co-operation of the dealers and garagemen, who gladly give their time to the instruction of the classes without charge. Each class is in charge of two instructors to whom the various parts of the automobile have been previously assigned. Thirty minutes of each class period is devoted to roadside emergency repairs.

During the first month the school has been in operation this feature has proven to be of great value in enabling owners having breakdowns on the road to get in without calling on the garages to send out for them. Such subjects as how to locate trouble, how to cope with broken springs and wheels, the use of kerosene

when the gasoline runs out and the filling stations are closed, and similar troubles which occur to the motorist out on the road are covered in the discussion of road-side repairs.

The club committee has found that the information given under this head is not only valuable to those who never studied an automobile, but serves to keep up the interest of the more advanced students. In the demonstrations the instructors show the uses of the various parts and their relation to each other and the damage which may be done by improper driving and lack of attention.

It is the plan of the club to continue the classes throughout the duration of the war with a view to releasing as many mechanics from the repairshops as possible for war service.

The Chattanooga Automobile Club, which recently assisted in the organization of a live automobile club in Birmingham, Ala., has been invited to assist that organization in starting an automobile school in that city along the lines of the one now in successful operation in Chattanooga.

The club's committee in charge of the highways transport work will also aid the Birmingham Automobile Club in the inauguration of a Return Loads Bureau in that city. The Chattanooga Automobile Club was the first organization in the South to start this movement, and has now in operation the first of six motor truck lines to the cities and towns in the Chattanooga territory.



*These Chattanoogaans are attending a course of lectures on automobile repairs and maintenance*

# The RETAIL NEWS

## PACIFIC COAST

Lloyd's Auto Electric Works, Willard battery dealer in Petaluma, Cal., has added an electrical repairshop.

Houts-Moulton Overland Co., Santa Rosa, Cal., has secured the agency for Lalley farm lighting plants.

Forrest & Carlson have purchased the Central Garage, Healdsburg, Cal.

Girrens Bros., Santa Rosa, Cal., will distribute the Fordson Tractor in that territory.

R. O. Hurd, owner of the Battery Shop, Santa Rosa, Cal., has sold the branch shop at Healdsburg.

Del Kissack has bought the interest of Andy Clark and is the owner of the Healdsburg Garage, Healdsburg, Cal.

R. K. Airth has sold the Pacific Garage, Eureka, Cal., to Bruce W. Aurandt.

The Airth Automobile Co., Eureka, Cal., has opened new Buick salesrooms on Fifth Street near the post office, and will handle the Lalley farm lighting systems.

H. A. Hine has sold the garage at Seventh and D Streets, Eureka, Cal., to G. A. Fulton.

Hermanson & Green, Seventh & D Streets, Eureka, Cal., have added an accessory department and enlarged their Maxwell salesroom.

H. W. McIntire has opened the Scotia Garage, Scotia, Cal.

## SOUTHWEST

W. E. Clayton, Altoona, Kan., has opened a Ford accessory shop and will also do repairing and vulcanizing.

The Nessly Garage, Belle Plaine, Kan., is being extended to the alley, making the building 137 feet long.

Sam Schnieder, Bison, Kan., has leased the Strang Garage at Bison and is ready for business.

The Motor Inn, Horton, Kan., is now in the hands of Berney & Sullivan, Peter Berney and Walter Sullivan forming the partnership.

The Nelson-Newlin Tire Service Co., Marion, Kan., has sold out. John Newlin, manager, was called to military service.

The Fixit Garage, McCune, Kan., has changed hands, Emmett Harley selling out to Alfred Swain and Amos Voltz. The new firm will be known as Swain & Voltz.

P. W. Mathews, Pittsburg, Kan., has opened a repairshop.

Fred E. Barlow, Sylvia, Kan., has leased the L. R. Cook Garage.

The Golden Belt Garage, Wamego, Kan., is nearing completion. The garage is commodious and well equipped.

Sam Offut, Wichita, Kan., has purchased from H. W. Overstake the Southwest Garage at Cleveland and Douglas.

S. P. McKinney, Amarillo, Tex., has purchased an interest in the Deason Tire Service Station at 312 East 4th Street.

The Overland-Orange Co., Orange, Tex., has opened a service station, with P. Abel, manager.

W. A. Roberts, Waxahachie, Tex., assumes the new management of the Central Texas Automobile Co. to succeed J. G. Brown, who has been connected with that company for more than a year, and will go to Dallas to become secretary-treasurer of the Southern Tire Co.

Frank Harris, Alva, Okla., has purchased the shop of Bill's Auto and Supply Co.

The Kincaid & Robb Garage, Comanchie, Okla., is adding another Bowser gasoline station to its line of accommodations.

Boles & Heath, Cherokee, Okla., are successors to J. M. Heath in tire repairs service.

## NORTHWEST

Castor Bros., Plainfield, Iowa, have leased the Plainfield Garage from Herman Gulick.

The Carlson Repair Co., Stratford, Iowa, is closing its garage.

G. M. Fravel, Spencer, Iowa, has taken over the Foster Garage there.

The Safety First Garage, Mt. Ayr, Iowa, has been sold to John P. Drake.

Z. E. Armstrong, Spencer, Iowa, has purchased the interest of his partner in the New Way Tire & Rubber Co., and will continue the Cadillac agency.

J. H. Patton, Jr., Harlan, Iowa, has closed his salesrooms.

## MIDDLE WEST

The Master Truck Sales Co., 720 Market Street, Youngstown, Ohio, headed by E. N. Eaton, is a new truck organization which occupies the showrooms formerly used by the Mahoning Motors Co., which has dissolved and quit business. The Mahoning Motor Co. handled the Oakland and King cars, the latter not represented here now.

The Forest City Motor Co., Cleveland, which distributes the Cole aero-eight models in this territory, has removed to 6504 Euclid Avenue, where it has largely increased facilities for both sales and service.

The Little Better Service Garage, Litchfield, Mich., has opened its new garage in the building formerly used as a livery barn by C. E. Harter.

## NEW TRUCK AND TRACTOR DEALERS.

The Duplex Truck Co. has appointed the following dealers: Truck Service Co., Cedar Rapids, Ia.; Lee Joynes Co., Walla Walla, Wash.; Carl W. Moegling, Pomeroy, Wash.; Big Bend Motors Co., Ritzville, Wash.; J. Schuff, Castle Rock, Wash.; Echo Motor Car Co., Tonwanda, N. N.; United Motor Co., Seattle, Wash.; Bounds Motor Co., Weldon, N. C.; R. G. Edgerton & Co., Norfolk, Va.; F. H. Campbell, Zanesville, Ohio; City Garage, Rockwood, Tenn.; Earl Horner, Dayton, Wash.; A. J. March Motor Truck Co., Milwaukee, Wis.; W. H. Waffles, Lynden, Wash.; Homer Sly Auto Co., Petoskey, Mich.; W. H. Aspinall & Co., Weston, W. Va.; G. W. Otto, Wheeling, W. Va.; Mobile Auto Co., Mobile, Ala.; Elias Brong, Billings, Mont.; W. A. Clement Motor Co., Omaha, Neb.

The Stearns Motor Sales Co., Cleveland, has secured the agency for the Vim truck for the Cleveland territory.

The Springfield (Ill.) Truck & Tractor Sales Co. has been organized and will be distributor for the International and the Waterloo Boy tractors and trucks in the Sangamon County territory. J. E. Butts is president and general manager of the new concern. He was formerly distributor for the Saxon and other passenger cars.

The A. & A. Motor Car Co., Erie, Pa., Reo distributor, has also secured the agency for the Acason for that territory.

The Chicago Pneumatic Tool Co., Chicago, has appointed the following motor truck dealers: John Lottridge Motor Sales Co., Atlanta, Ga.; Alabama Motor Sales Co., 1820 Third Avenue, Birmingham, Ala.; Southern Motor Sales Co., Fort Smith, Ark.

The K. C. Electrical Construction Co. has recently purchased the storage battery and starter business of Hayes & Murrill of 304-6 East Fifteenth Street, Kansas City, Mo., and will hereafter maintain a storage battery and starter department. The company is agent for the General battery and also handles the Ever Ready. The company will move the storage battery business from East Fifteenth Street and its electrical construction and supply department from 1333 McGee Street to new quarters at 1409-11 McGee Street by Nov. 1.

## NEW GARAGES

R. J. Postlethwait, Valley Center, Kan. New York Garage, Kansas City, Mo. G. W. Willis, Washington, Kan. Mexico Motor Co., Mexico, Mo. Farmers Motor Supply Co., Springfield, Ill. I. Abramson (\$3000), 858 North Orkney Street, Philadelphia.

J. Gibson McIlvan Co. (\$14,000), 58th Street, and Woodland Avenue, Philadelphia.

Robert Killough, 535 Pelham Road, Philadelphia.

James Brady (\$3000), Germantown Avenue and Luzerne Street, Philadelphia.

## Maxwell Prices Increase

DETROIT, Oct. 7—The Maxwell Motor Co., Inc., advanced the prices of its passenger car models, \$70, effective Oct. 4, as follows:

Model	New Price	Old Price
Five-passenger	\$895	\$825
Roadster	895	825
Five-passenger, all-winter top	1005	935
Roadster, all-winter top	890	910
Sedan	1565	1495
Coupe	1520	1450

## Dort Prices Up

DETROIT, Oct. 1—The Dort Motor Car Co. has increased the prices of its models as follows:

Model	New Price	Old Price
Touring and roadster	\$985	\$925
Coupe and sedan	1415	1325
Sedanet	1150	1060

## Streator to Be Sold

OTTAWA, ILL., Oct. 5—A decree of foreclosure and sale has been entered against the Streator Motor Car Co., formerly of Streator, Ill. The sale is set for Thursday, Oct. 10, at Ottawa, and will involve real estate in Streator.

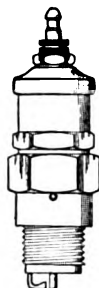
## Brockton Fair Show Off

BROCKTON, MASS., Oct. 5—The calling off here of the big Brockton Fair was a big disappointment to the Boston motor car and truck dealers, for nearly all of them had bought space for exhibiting their lines this year. The motor show at the fair a year ago was the largest outdoor exhibition in New England, and this year with tractors added it promised to be even bigger and better.

# Automotive Equipment

## KANT BREAK SPARK PLUG

This plug has an enclosed spark gap in the upper part surrounded by a ventilator. The electrode is knife-blade shaped and made of nichrome alloy. Price \$1.50.—Mazda Electric Mfg. Co., St. Louis, Mo.



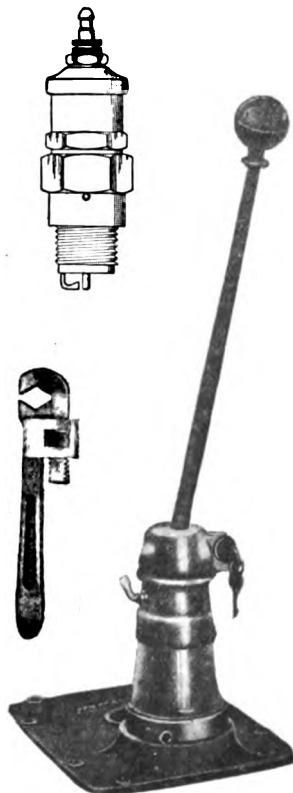
## WALCO ADJUSTABLE HEX WRENCH

This is an adjustable wrench for hexagon nuts, the design being such that four sides of the hexagon are gripped at once. It is claimed that the wrench will not mar the work and will work in contracted places. The handle is shaped so that it may be used as a tire tool. No. O size takes hex nuts  $\frac{1}{2}$  to 1 in. across the flats. Price \$1.75. Walworth Mfg. Co., Boston.



## K & S GEARSHIFT-LEVER LOCK

This is a lock to lock any kind of a center gearshift lever in neutral. A vertical sliding bushing is held in the locking position by a steel pin, the whole being encased in a brass casting held to the transmission case with set screws. It cannot be locked without the withdrawal of the key. Price \$10.—K & S Auto Heater & Lock Co., 3357 Michigan Avenue, Chicago.



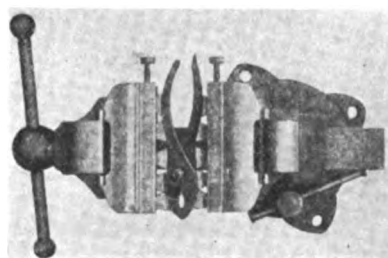
## VULCAN SPRING RACK

This is a display rack for Vulcan springs and has a capacity of 32 assorted springs. The rack is supported like an easel and the springs are laid on pins. Price \$5, but furnished free with orders of 25 or more springs. A smaller size rack to hold 12 springs is furnished free with an order for 12 assorted sizes of springs.—Jenkins Vulcan Spring Co., Richmond, Ind.



## UNIVERSAL EQUALIZING VISE JAW

This is a supplementary vise jaw that will accommodate itself automatically to irregular shaped work. The gripping lugs are made of cold-drawn hardened steel and are so shaped that pressure on any part of the face of the jaw will cause an adjustment of the gripping lugs to conform to the shape of the object. Made in 4 and 5-in. sizes to fit corresponding size vise jaws. Prices, \$8 for the 4-in. and \$9 for the 5-in. size.—Universal Equalizer Co., 808 Broadway, Cincinnati, Ohio.



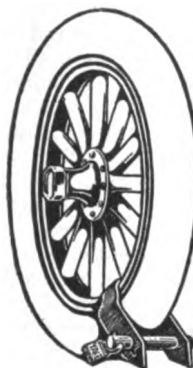
## NEWLITE LENS

This is a headlight lens to eliminate glare and throw a distance beam of light in the center. The entire surface of the lens is composed of fine horizontal miter cuts and the center contains five refracting grooves. It is designed to throw the light down on the road and give a wide light area on both sides of the car. Price \$3 per set for all sizes.—Newlite Lens Co., Harrison Street and Ashland Boulevard, Chicago.



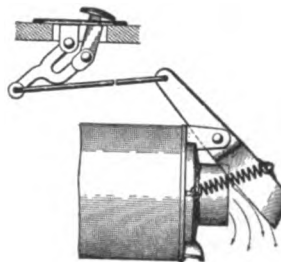
## TATTLE-TALE AUTO THIEF STOPPER

This device is clamped around the tire and the rim and is locked in place with a padlock. When in this position it forms a considerable projection beyond the tire and any attempt to run the car would result in severe jolting and the attraction of attention. Made in five sizes, the 3-in. selling for \$3; 3½-in., \$3.50; 4-in., \$4; 4½-in., \$4.50, and 5-in., \$5.—Electro Depositing & Mfg. Co., 2206-2210 Wash Street, St. Louis, Mo.



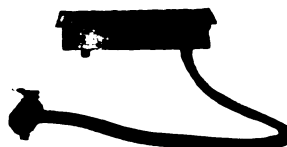
## T. B. SAFETY CUTOUT FOR FORDS

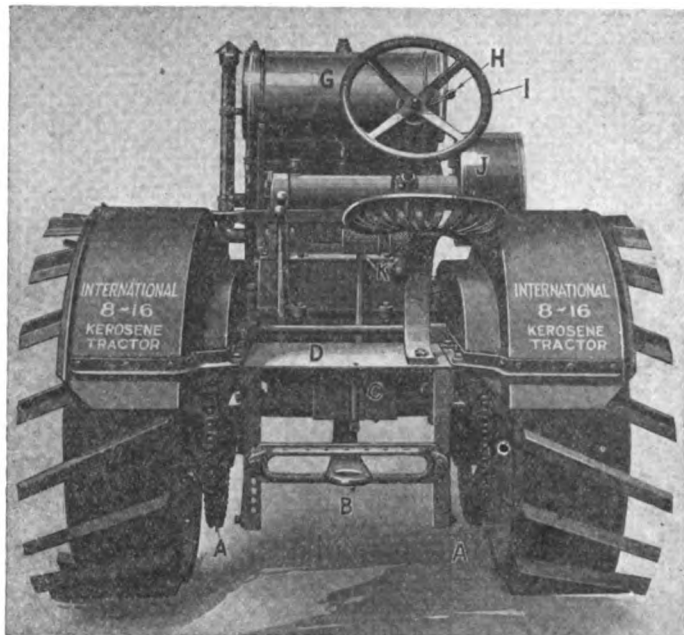
This cutout is attached in place of the rear head of the Ford muffler, the regular outlet being at the bottom and the cutout being at the center. A cup-shaped cover ordinarily closes up this opening, but when it is opened, the cover is at an angle so that the gases are deflected downward. Price complete with lock pedal, bolts and connections, \$2.50.—Safety Cut-Out Co., 731 Plymouth Court, Chicago.



## K & S CAR HEATER

This is a car heater to be installed in the floor of the tonneau or the driver's compartment. A piece of flexible tubing connects the radiating coils with the exhaust pipe, a split clamp being provided to make the connection. The coils are covered with a grating.—K & S Auto Heater & Lock Co., 3357 Michigan Avenue, Chicago.





*The Case 9-18. Both rear wheels are drivers. A, drive chains; B, adjustable drawbar; C, tool box; D, platform; E, gear shift levers; F, air strainer; G, fuel tank; H, spark and fuel control levers; I, steering wheel; J, belt pulley; K, brake and clutch pedal*

## A New 4-Cylinder International Tractor

It has a High-Speed Vertical Cylindred Engine with Removable Cylinder Sleeves —Control and Steering are Centralized

THE International Harvester Co. has departed from its established design in tractors by building the new 8-16 International tractor with a high-speed, 4-cylinder, vertical type engine. This is done to provide a high duty engine which will withstand the strain of continuous work on the farm and one which will give service under all conditions under which a tractor of this rating will be called upon to operate.

One of the distinguishing features of the International is its approach to motor car practice in control and steering, exemplified in the centralized control. Also the hooded engine and the ready accessibility of all parts is suggestive of motor car practice. Other special features are removable cylinder sleeves, throttle governor and chain drive. A unique departure from ordinary practice is the placing of the radiator behind the engine instead of in front.

Particular attention has been given to the centralization and convenience of the control. The steering wheel is within easy reach of the operator's seat and the spark and throttle levers are as conveniently located as they are on a motor car. The same applies to the speed changing levers, while the clutch and brake are operated by foot levers.

The advantage to the operator of ready accessibility of all parts has been given special consideration in the design of the International. The arrangement of the tractor is such that it is easy to get at every bearing with the least possible effort. When the hood is raised the engine, carbureter, lubricator, governor, ignition and cooling systems all are easy to get at. Fuel tanks, radiator and lubricator all are handily located for filling.

The engine in the International is a 4-cylinder, vertical, 4 x 5-in. water-cooled, valve-in-head engine of the com-

pany's own design. It is entirely enclosed and the push rods and tappets are covered by a dust-proof construction. The cylinders have removable grey iron cylinder sleeves. Thus it is not necessary to discard an entire cylinder in case of scoring, as a new sleeve can be inserted with little trouble and small cost.

The pistons are of special analysis, grey iron, first machined, then heat treated and finally ground to exact size. The connecting rods are I-beam cross section, of open hearth drop forged steel. The same grade of steel is used in the crankshaft, which is turned, ground and polished to size. There are three crankshaft bearings, all fitted with high grade babbitt, backed with bronze.

The carbureter is patented by the company, and while simple in design, all but perfectly vaporizes low grade fuels. The intake is provided with an air heater, which is cast integral with the manifold.

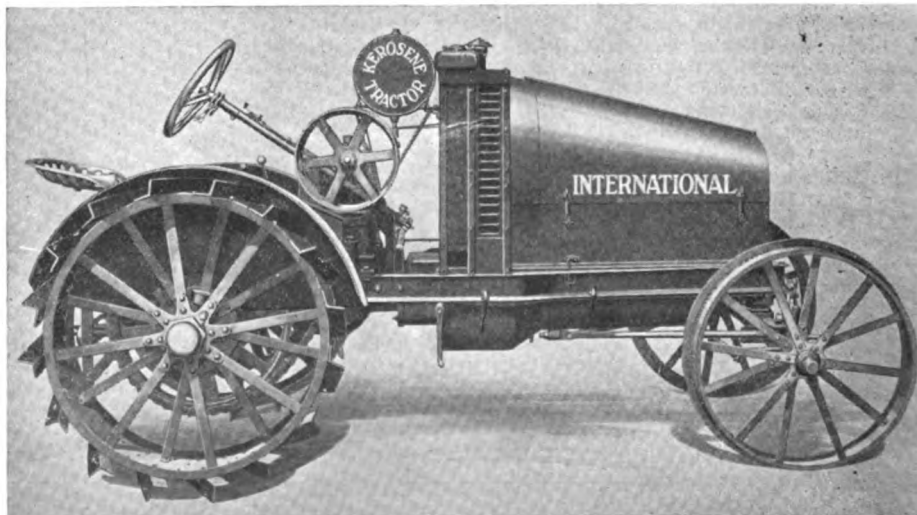
An air strainer protects the cylinders from the entrance of dust and grit.

The International is equipped with a force feed mechanical oiler and all the bearings and working parts are supplied with the right amount of oil at all times. Oil is supplied to the four cylinders, three crankshaft bearings, four connecting rod bearings and to the governor. The front and rear wheels and other parts are supplied with hard oilers.

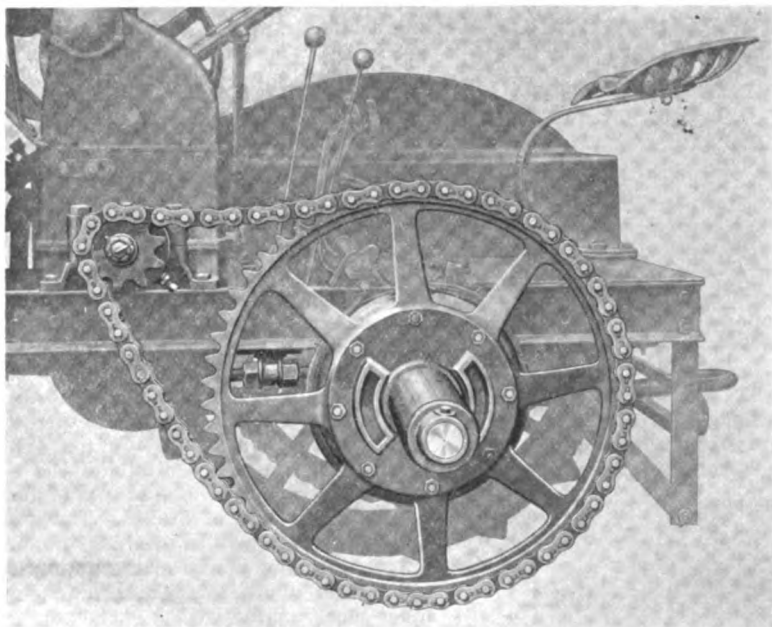
The high-tension magneto is located in front of the engine and is dust and water-proof. No batteries are needed as the engine starts and operates on the magneto. The time of the spark is controlled from the operator's seat.

Cooling is by thermo syphon system with heavy duty, tubular radiator and fan in the unusual location of behind the engine.

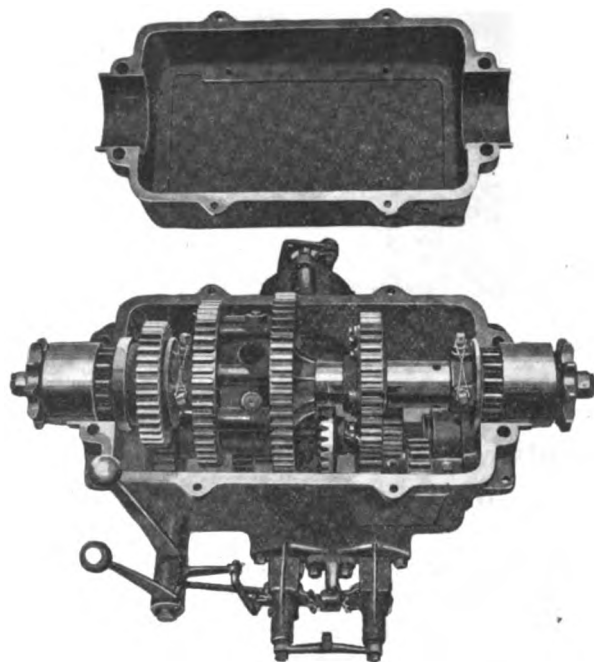
The governor is fly ball, throttle type, which regulates the feed to the load by



*The International 8-16-Hp. Kerosene Tractor is suitable for field, belt and road work*



One of the two drive chains on the International. The clutch on the sprocket makes it possible to remove the rear wheels without disturbing the driving mechanism



The gearset with the cover removed. At the lower part of the illustration is seen the safety device which prevents shifting more than one gear into operation at once

controlling butterfly valves in the manifold. The governor is enclosed in a dust-proof case. It is set at the factory to regulate the engine at a normal speed of 1000 r.p.m., but lower speeds when the engine is running on light load are under the control of the operator by the usual control.

The clutch is multiple dry disk. It consists of alternate driving and driven disks. It is unaffected by temperature changes and is completely enclosed in a dust-proof case.

The gearset also is completely enclosed and runs in a bath of oil. All gears are high grade steel, machined, carbonized and hardened. The main drive and counter shafts of the transmission run on high grade, heavy duty roller bearings. The drive chain sprockets are made of high grade steel and are ma-

#### Specifications of the International Tractor

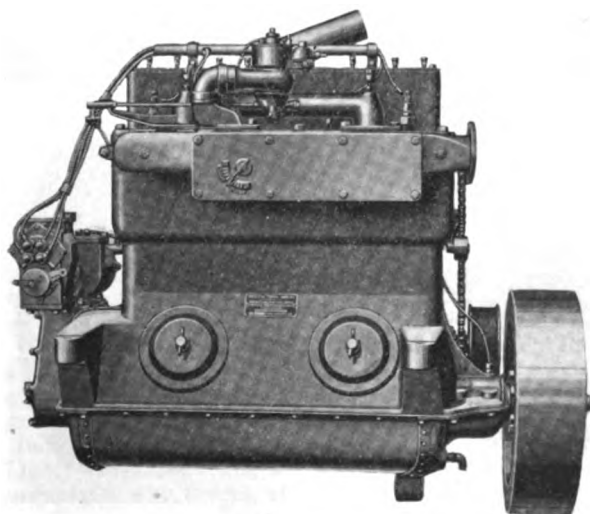
Rated horse-power.....	8-16
Cooling system capacity.....	12 gal.
Fuel tank capacity.....	10 gal.
Wheelbase .....	85 in.
Width .....	64 in.
Length.....	132 in.
Height .....	65½ in.
Rear wheel diameter.....	40 in.
Front wheel diameter.....	32 in.
Face rear wheels.....	12 in.
Face front wheels.....	4 in.
Pulley diameter.....	12¼ in.
Belt speed.....	2000 r.p.m.
Weight .....	3300 lbs.

chine cut, carbonized and hardened for long life.

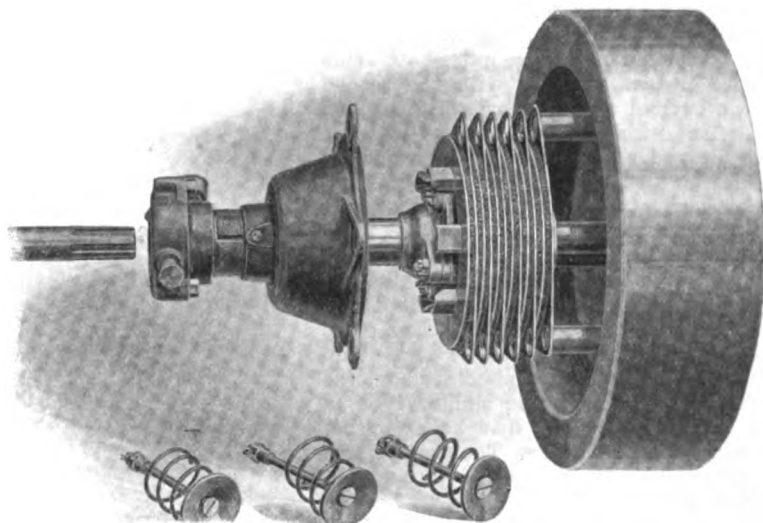
Final drive is by two heavy roller chains, one to each rear wheel. Adjustments for tightening the chain are provided. The speeds are 1¼, 2½ and 4 m.p.h. forward and one reverse.

The steering gear is of motor car type, is quick acting and the wheel is within easy reach of the operator. In addition the tractor can be provided with a self-steering device, which attaches to the right-hand front wheel knuckle and which will guide the tractor when plowing. This is provided with a foot trip, making it easy to drop the device into the furrow after making turns.

The drawbar is strong, flexible and adjustable. It has a vertical adjustment of from 14 to 20 in. in height and has a lateral swing.

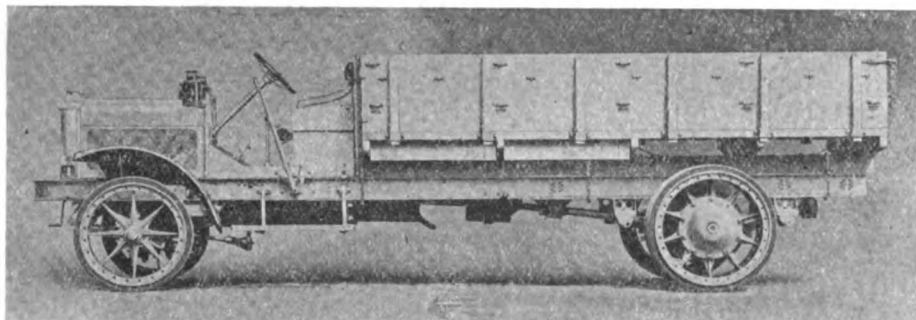


Left side of the engine overhead valves are a feature and it runs at comparatively high speed. The valve mechanism is protected by a dust-proof housing



The multiple-disk clutch which operates dry. The springs are shown below and adjustment is possible by means of the nut on back of the casing





*External appearance of the new White heavy model, which now has double reduction drive*

## Double Reduction For 3-and 5-Ton Whites

### Two Heavier Models Now Have Unit Power Plant—Braking System Redesigned

**T**HE White Co., which for some time has used the double reduction gear principle in the drive of its 1½ and 2-ton trucks, has applied this principle to revised versions of its 3 and 5-ton vehicles, in which it has also made a number of other improvements.

In these two heavier models there is now employed a unit power plant which is an evolution of the White block engine; a cast radiator of the vertical tube type with removable head and a new system of brakes.

Deliveries will be started as soon as factory production overtakes urgent military demands.

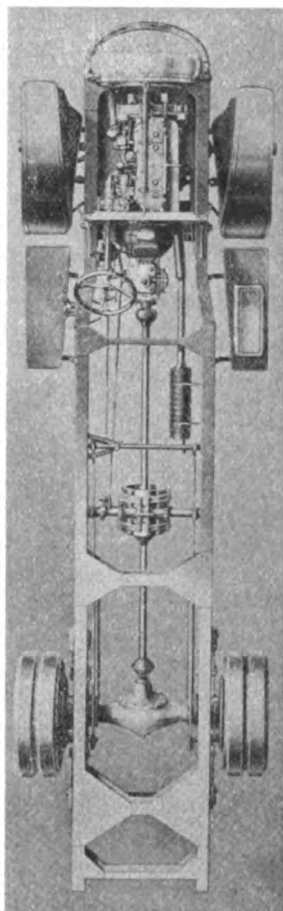
The new double-reduction gear drive has a floating rear axle concentric with the axle housing, and operating through an intermediate gear within the rear wheel hub; power is transmitted from the gearset to the rear driving member through a propeller shaft.

There is a first reduction through the bevel gear and drive pinion in the center of the rear axle, from which the power is carried by live floating axle through the center of the housing to a gear at the wheel end of the live axle shaft. This gear, in turn, meshes with the second gear, carried on the housing of the live axle, but inside the hub case of the rear wheel, and this second or intermediate gear, in turn, meshes with an internal ring gear attached to the wheel, inside of the hub case.

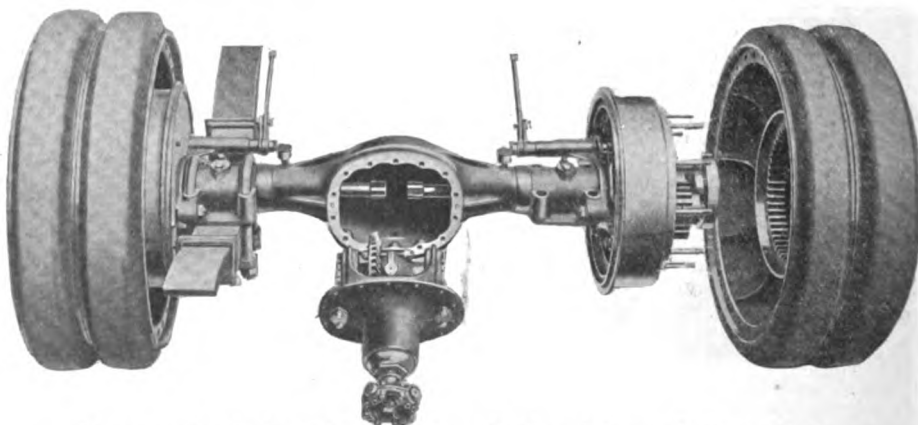
By this manner of applying power to the wheel, a second reduction is obtained between the three gears in the hub case, very like the reduction which takes place between the sprocket wheels of a chain drive. The power is applied at about the same distance from the rim as it is in the case of the plain drive, thereby retaining that advantage. The use of gears provides a rolling contact throughout, reducing friction.

In upholding its retention of chain drive design, the White Co. always had contended that the chain and sprocket

afforded, in a heavy duty truck, a double reduction system, one reduction in a jack-shaft, and a second reduction between



*Plan of White chassis*



*Components of the White double reduction drive and the method of applying the principle*

the chain and sprocket wheels, thus giving a large range of gear ratio and, consequently, a greater flexibility than can be had in any single-reduction shaft drive, unless the gear housing be made very large, and the rear axle, in consequence, heavy and unwieldy. It also is contended that the chain drive had the additional advantage of the application of power to the rear wheel on a sprocket attached to it, so that the power is applied nearer to the wheel rim, and by rolling contact, between the chain and sprocket.

In addition to the new drive system, improvements and refinements have been made in a number of features of its heavy duty trucks. Among these are a unit power plant, which is an evolution of the White block engine; a cast radiator of the vertical tube type with a removable head, and a new system of brakes. The 3 and 5-ton are identical in design, the only difference being in the size. Both use a unit power plant, comprising a four-cylinder block engine with a removable cylinder head. In the 3-ton truck, the bore is 3¾ in. and in the 5-ton 4¼ in. The stroke in both is 5½ in.

The radiator has a cast removable head, permitting quick replacement of damaged tubes, and is flexibly mounted on springs to absorb road shocks. The clutch is a single-plate type, operating in oil. The gearset has four speeds forward; fuel is fed by a vacuum system to a White carburetor.

Through the adoption of the new type of drive it has been possible to improve the design of the brakes. The service brake is operated by pedal, and contracts on a drum on the driveshaft. It is mounted amidship on a cross-member of the frame, where it is more accessible and where a larger braking service can be used than if it were on the wheel. The emergency brake, operated by lever, expands on drums on the rear wheel, completely enclosed and provided with a simple external adjustment.

Metal wheels are standard equipment and on the 3-ton truck carry 36 x 5 solids in front and 40 x 5 dual solids, S. A. E. standard tires. The 5-ton truck has 36 x 6 solids in front and 40 x 6 dual solids in the rear. The pressed-on type is standard equipment, but demountable may be obtained at extra cost.

# Finding Motor Truck Prospects

## What Method Should the Motor Truck Dealer Pursue to Find Prospects?

**H**OW can the motor dealer who starts now to sell trucks find his prospects and how shall he pay his salesmen?" Motor World's correspondent asked W. E. Rehbein, manager of the Garford branch in St. Louis.

"The pay question is one that must be handled according to local conditions," replied Mr. Rehbein. "Custom and the bookkeeper must answer.

"In some communities it is the practice to pay salesmen straight salaries. In others they are given a drawing account or a guarantee and a percentage. The commission must in the end govern all sales. If the salesman is put on a salary, he must make good or be fired. No dealer can carry deadweight.

"The commission cannot be fixed for all dealers. It necessarily is related to the fixed overhead. In other words, the dealer has the privilege of charging the salesman for his equipment, such as location, demonstration arrangements and other expensive aids to selling.

"A dealer must figure to make money and must regulate his commissions accordingly. It is not the same thing to employ a man to sell trucks and tell him 'to go to it' and to hire another man and supply him with prospects developed at some risk and to be sold from an expensive showroom where he is given every aid in selling. The dealer who does most of the work himself should charge for these things.

"There is not, so far as I know, any fixed status of employment of salesmen, and the trade is old enough to formulate one. I would like to see some referendum on this line through a trade

### Rehbein Suggests:

*Pick certain lines of business for which your trucks are suitable.*

*This winter it must be an essential line.*

*Never go after a prospect until you know his requirements and are sure you can handle them.*

*A successful truck sale is one in which the truck fits exactly into the niche for which it was sold.*

*The motor truck dealer must realize that he is really not selling motor trucks but in fact motorized transportation.*

paper. For instance, I do not now know how other Garford branches regulate this problem.

"Straight salaries are, of course, necessary for men who have certain duties connected with selling—such as men who are sent to handle a certain class of trade where sales are certain to be made as soon as certain trade technicalities are explained.

"As to getting prospects—I have this suggestion: Pick certain lines of business that your trucks are suitable for. For this winter at least it must be an essential line. Take coal, for instance. Look into the coal business and canvass carefully the coal industry in your territory. Learn the present difficulties and see if you can overcome them. List all coal possibilities and be sure that dump bodies are available. Also be certain that you can solve the existing troubles. Then go after the coal prospects and keep hammering away on the entire coal industry. Specialize. If the trade you select has many angles, be sure which

## A Dealer Must Figure on Profits and Regulate Salesmen's Commissions Accordingly

one fits best to your line of trucks and specialize on that.

"Never go after a prospect until you know his requirements and you are sure that you can meet them. There is no use selling a truck that will not deliver the service. It is a handicap that will ride you until you go out of business.

"If it should be possible that you can motorize the line you have selected, then branch out. By the time you have worked this one line to a point near capacity for your trucks you will find that another line is waiting for you. As your trucks go on the streets and do the work planned and promised for them, other inquiries will be made and other lines of work will develop without worry.

"The motor car dealer will find the truck field much different from that of the passenger car. He will find that he must specialize. A truck is not a truck in the same sense that a car is a car, with power and price as the great points of variance. A successful truck sale is one in which the truck fits exactly into that niche for which it was sold. Especially now is the truck business individual. Since truck sales were restricted to essential uses, this branch has put on the deferred list about 75 per cent of its prospects.

"One big help to the new dealer will be the suspension of trade-ins. Positively no used truck will be taken in as long as it can be made to run, and then it is not worth taking in. This eliminates the active price cutler from the field at present.

"The motor dealer must realize that he really is not selling motor trucks but, in fact, is selling specialized transportation."

## If Ten Dealers Would Start Trying —

KANSAS CITY, Oct. 7—If ten dealers in any fair-sized town were to start really trying to sell trucks, the farmers would soon be flocking in to get trucks.

Hal Brace, sales manager of the Hudson Brace Motor Co., Kansas City, suggested this as the way to "get something going." The company is distributor for Hudson cars, Acme trucks and Lalley-Light. Brace is getting a splendid dealer-organization on trucks, as he already has on Hudson cars—because he has the faculty as well as the method, of helping the dealers move the stock.

"Farmers are already well enough ac-

quainted with the theory of trucks," Brace continued. "They've been reading about trucks, in advertisements and magazine articles. They probably have in their minds, all the sales arguments anybody could give them. They often have investigated trucks more or less.

"But the thing needed to get them started buying, is the punch and the spirit that the salesman can put into a sales talk. The salesman may say the same thing that the farmer has read—but the salesman can put it into a form, and give it a significance, that will make the farmer want to buy.

"The salesman doesn't merely repeat a sales talk, or tell the farmer what he should buy, or why. The salesman transmits to the farmer his own enthusiasm over the utility of trucks—he gives the farmer the inspiration to buy. And when a few farmers of a community get that inspiration, it will quickly spread to others.

Mr. Brace referred to some of the Acme dealers in his territory, who are taking trucks in carload lots.

"These men KNOW they can sell trucks—and they are going out and sell them."

# Coast Dealers Take To Tractors

## *Los Angeles Demonstration, with 37 Makes, Made Them Sit Up and Take Notice*

LOS ANGELES, Oct. 1—Dealers of southern California are beginning to realize there is a possibility for the future in the tractor. The third annual tractor demonstration closed here Sept. 23, and among the most interested visitors during the 6 days of its progress were motor car dealers. These were not only sub-agents from the smaller cities and towns who were there in large number, but some of the biggest distributors in this part of the state devoted as much as a full day to the tractors.

"I guess we'll have to sell tractors or fight," is the way one distributor who has been selling an average of 50 passenger cars a month expressed the sentiment of all. The intense interest displayed by these dealers was a surprise to anyone on the inside track of information here. It was chiefly surprising because at the demonstration one year ago an attempt was made to sound the sentiment of these same men in regard to tractors, and all of them said they were not interested or that they had all the



*A very small section of the Los Angeles tractor demonstration, which, in 6 days, drew an attendance of over 150,000*

business they could attend to as it was.

This demonstration was conducted by the Traction Engine and Implement Dealers' Association of Southern California. There are at present only two motor passenger car dealers in southern California members of this association. By next year, however, it is very probable that this state of affairs will be different, and if once the distributors throw their energy, ability and financial

strength solidly to the tractor business they undoubtedly will make competition keen for the farm implement men.

More than 30 display tents were pitched on the field of 500 acres, a part of the La Brea rancho. Tractor factory representatives said the exhibition was the largest that had been held any place in the country. Thirty-seven different makes of tractors participated and there were 64 models, sizes and types in operation.

The attendance for the 6 days' event was 150,000. The closing day more than 40,000 persons were on the grounds. Paved boulevards led direct to the demonstration from all directions, and approximately 10,000 motor cars were parked in the fields and alongside the roads. No admission fee was charged, the tractor people not yet having reached the point where they can collect at the gate from the probable buyers they hope to interest in their product as have the automobile men.

In the character of the soil the tractors were up against the worst thing they have tackled anywhere. The soil was oil gumbo on which not a drop of rain had fallen for several months. Huge cracks and fissures showed on the surface, but these did not make it any easier to plow. One demonstrator, apparently seeking an alibi for the fact his tractor rose on its rear wheels repeatedly and the weight of four men besides heavy plow discs was required to force them back to terra firma, said in his lecture he was not accustomed to operating in coal mines. He had noth-



*Not all the demonstrating was done behind plows. This is a Heider driving a feed-grinding attachment*



# Buy Liberty Bonds





# Buy Liberty Bonds



ing to be ashamed of, however, as even the heaviest, such as the big Holt, Yuba and Best, acted in the same manner.

There was nothing in the way of competition and the only drawbar tests were those put on as a free will offering. The tractors were required as a part of the public demonstration to plow with at least two bottoms\* to a depth of 6 in. Some operators, just to show what could be done, hooked on six or eight bottoms and attempted to go down 10, 14 and even 20 in. These machines invariably stalled, however. The plows gave more trouble than the tractors. They nearly always were followed by two men, who were kept busy altering the adjustments. Pieces broke from the steel discs and points were torn from the shares.

Each tractor was allotted a plot of ground to plow that was 500 ft. long and

in width represented 4 ft. for each horsepower rating. The public was left to draw its own conclusion from the number of bottoms used, the depth, speed and apparent ease or difficulty with which the job was accomplished. Two such demonstrations were made each day and private exhibitions were put on almost constantly.

A few tractors appeared here that have not been exhibited east of the Sierras. One of them was the R. & P., which is being built at the Los Angeles plant of the Republic Motor Truck Co. Another was the Little Husky, which is made here under direction of the Homer Laughlin Engineers' Corporation. Both of these got away with the job.

Several stationary exhibits showed the versatility of the tractor in operating machinery. A Holt was connected up to

an excavator and an open challenge was made this outfit would remove more dirt of any kind than any other excavator. Other displays included the operation of hay balers, stacking, grinding and pumping machinery.

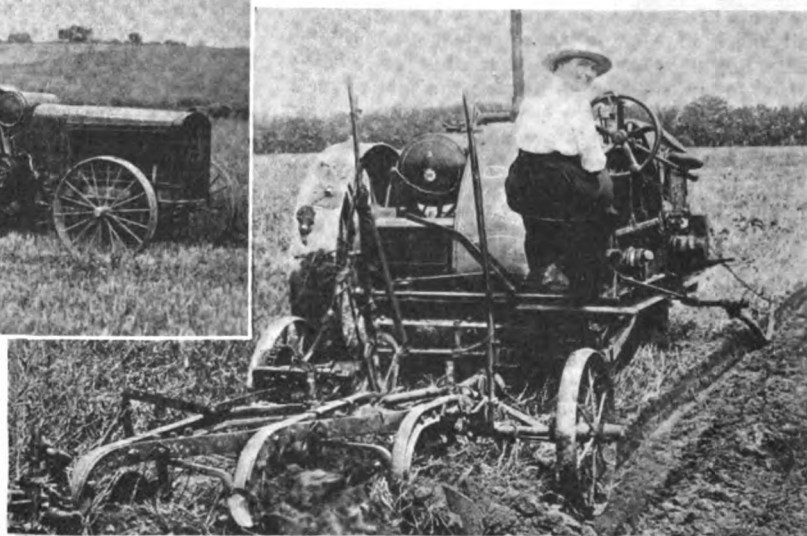
In addition to the tractors there was a large display of farm implements of all sorts, motor trucks, commercial cars, lighting devices and accessories.

The different makes of tractors included: Oil Pull, Avery, Bean, Stinson, Heider, Cleveland, Cleveland Steel Mule, Bear Cat, Moline, Lauson, Case, Waterloo Boy, Monarch, Sandusky, Fageol, Yuba, Trundaar, Lambert, Holt, International, Fordson, Titan, Mogul, R. & P., Samson, Nilson, Sure Grip, Interstate, Stuse Mar, Russell, Little Husky, Belt Rail, Beeman, Appleton, E. & B. and the L. A. Ford tractor attachment.



Above—Four women near Peoria, Ill., save the wheat in a labor shortage, with men gone into the service of their country

Right—Virginia Lewis, Chatham, Ill., drives her own tractor on her 500-acre farm and has won the approval of her neighbor farmers. She visited the Salina demonstration to become better posted



## Business—Not a Fad

MISS VIRGINIA LEWIS of Chatham, Ill., is farming 500 acres of land and is doing all the work herself since her two brothers entered the army. Last year she rented the property, but the tenant was not progressive and Miss Lewis decided to operate the property this year alone. She invested in a Case tractor and has used it in plowing, harvesting and other farm work. She recently harvested 200 acres of wheat, raising a large crop, and is now engaged in plowing the same tract for the fall seeding.

She handled the tractor with the skill

of a veteran and has secured excellent results. The three-plow service is found most successful. Miss Lewis drives the tractor all day without fatigue. Her success is the more remarkable from the fact that she never previously paid much attention to the active operation of a farm. She determined, however, to make a thorough study of scientific farming and is a close student.

She attended a tractor demonstration at Salina, Kan., and studied the operation of each machine, finally reaching the conclusion that the Case was best adapted for the farm of which she is owner.

Miss Lewis is prominent in social and religious circles of Chatham and is a fine type of the American girl. She feels that it is her duty to do the farm work, now that there is such a scarcity of man power, and by doing the farm labor herself she releases a man for the army. She proposes to continue this procedure until the end of the war and her brothers return. Her success has been widely commented upon, and neighboring farmers agree that no man could make a finer showing in handling a farm and that the Lewis tract is equal to any in Sangamon County.



## Lubricates Whole Car From a Single Point

**Reservoir and Multiple Pump Oils  
Everything—Can Be Attached  
to Any Make Car**

BRIDGEPORT, CONN., Oct. 7—A new system of chassis lubrication for cars and trucks by which all spring shackles, brake bearings, rear axle spring pads, steering heads, pedals, etc., can be supplied simultaneously with oil under pressure by turning a small lever conveniently situated in front of the driver's seat, is being manufactured by the Smith & Egge Mfg. Co., Bridgeport, Conn. The invention, which is the subject of a patent by B. H. Skelly, of the Smith & Egge Co., consists of a combination reservoir and multiple plunger pump located under the front seat or other central position, from which proceed a number of flexible steel tubes to the several points requiring lubrication on the chassis.

A car fitted with the system has been in operation over a year with satisfactory results. The lubricator as made at present has thirty separate plungers and corresponding tubes, displacing a like number of grease cups. The plan at present is that of applying the system to cars by simply removing the grease cups and screwing into their places the elbows or unions which are attached to the ends of the flexible tubes. A spring ball check in each of these unions prevents any leakage of oil over that required for lubrication by closing the tube as soon as the pressure is released.

Selling arrangements are not yet completed, but it is proposed to establish agents in large towns who will fit the system. As supplied from the manufacturer the system includes the lubricator, oil unions, clips and about 200 ft. of flexible steel tubing.

This lubricating system marks the entry of the Smith & Egge Co. into the automotive field, though it has been manufacturing force feed lubricators for stationary engines for many years.

### Restrict Oxygen Supply for Repairs

ST. LOUIS, Oct. 7—One of the newest troubles reported to the N. A. D. A. offices here comes from Illinois. The local committee working under the Compressed Air Division of the War Industries Board has notified acetylene welders in that state that their future supply of oxygen was to be restricted, and among other prohibited work was that on automobiles. The questionnaire was submitted to show there was no mistake about it. President Vesper has taken the question up to the Washington authorities, but at this writing has not received a ruling.

President Vesper this week named Executive Secretary E. E. Peake and Directors J. N. Johnson of Boston and A. E. Maltby of Philadelphia a committee

to take up with the proper authorities in Washington the standing of motor car salesmen and other employees as essential in the question of the draft. There appears to be much confusion on this question and an authoritative ruling is desired. The committee also will ask for a definite ruling as to the status of the conservation program.

### N. A. D. A. Adds 130 More

ST. LOUIS, Oct. 7—George M. McCutcheon of Atlanta, president of the Buick Motor Co. of that city, has broken all records for N. A. D. A. memberships. He is the first distributor to send in his entire list of dealers as members of the N. A. D. A. His list covers parts of Florida, Tennessee, South Carolina and Georgia. Shreveport, La., which recently organized a local association on suggestion from the N. A. D. A. headquarters, sent in a list that covered all dealers but one. The membership list for the week was 130.

### 1500 Cars Stolen in St. Louis

ST. LOUIS, Oct. 7—The police department fiscal year for stolen automobiles has just ended. The report shows that 1500 machines were stolen during the year. There were 267 arrests; 13 were sent to the state prison, 23 to the workhouse, 3 were paroled, 4 boys to reform school, 17 cases were nolle prossed, 45 cases were pending, 40 defendants were released for lack of prosecution, 58 were freed for lack of evidence and 4 were fined. Two men were killed resisting arrest.

### Waterways Will Help Truck Sales

WASHINGTON, Oct. 3—New fields for important motor truck uses will be developed if the present plans for extending inland waterways transportation are developed. A conference will be held here on Oct. 11, when delegates representing owners of boats on inland canals, members of chambers of commerce in cities located on or near the canals and others interested in waterway transportation will meet with the United States Railroad Administration and discuss the better distribution and more economic use of tonnage.

Motor trucks will play an important part if the waterways are developed, in hauling between the waterway and railroad terminals, between the waterways and the nearby cities and linking up the farmers with the waterways by means of rural express service.

### Trailers Coming From Grand Rapids

GRAND RAPIDS, Oct. 7—The J. M. Case Trailer Co. is a new company in the motor truck industry which will manufacture a complete line of all-steel semi and four-wheeled trailers of 3, 4, 6 and 10-ton capacity. The company also builds three sizes of pole trailers, 3½, 4 and 6-tonners, and trailer chassis equipped with gravity steel dump bodies. The president of the new company is J. M. Case.

## 89% of Dort Dealers Will Remain in Trade

**Questionnaire Shows This Percentage Will Stick, Whether They  
Get Cars or Not**

FLINT, Oct. 7—As a result of a canvass made of its dealers the Dort Motor Car Co. has compiled statistics showing to what extent its passenger car dealers have interested themselves in other lines and how they feel about the coming cessation of car production.

Of the 760 dealers reached only 150 were heard from, so the following percentages are based on replies of 20 per cent of the total.

Eighty-nine per cent of all the dealers will stay in the automobile business regardless of whether or not they get cars. This indicates that most of them have other lines on which they can depend and will not find it necessary to close up their establishments due to the stoppage of the production of cars. Only 6 per cent will go out of business and 5 per cent are doubtful as to whether they will continue. Ten per cent are subject to military call.

The following percentages indicate to what extent Dort dealers are interested in other lines:

- 67% operate service departments
- 38% are exclusive Dort dealers
- 56% maintain garages
- 49% handle trucks
- 32% are agents for tractors
- 60% handle accessories
- 75% handle miscellaneous lines
- 44% have gas filling stations
- 62% handle other makes of cars and Dort

### Colt-Stratton Adds D-E Trucks

NEW YORK, Oct. 7—The Colt-Stratton Co., Dodge Brothers distributor, has been appointed metropolitan distributor for Day-Elder trucks produced by the Day-Elder Motors Corp., Newark, N. J.

### Gasolineless Sundays to Continue

WASHINGTON, Oct. 5—Gasolineless Sundays will continue for the present, according to an announcement made by the Fuel Administration to-day. Statistics on the available supply of gasoline, it was said, shows the necessity for a continuance of the motorless period.

Following a suggestion from Governor Samuel McCall of Massachusetts that the restriction on Sunday automobiling should be removed to allow the public to use their automobiles and secure the fresh air that would combat the epidemic of influenza which is prevalent in the eastern states, Fuel Administrator H. A. Garfield made public an opinion from Brigadier General Charles Richard, Acting Surgeon General, United States Army, that automobiling would not influence the epidemic one way or another.

The total available gasoline in the United States outside of California for the week ended Sept. 23 was 3,302,000



## Forms That Help Get the Cash

The customer attaches to his check to the company the perforated stub bearing the same number as the card. The company attaches the required revenue stamp of 2 cents to each card—which makes its impression on the customer.

[illegible]

## Urge Better Priority for Makers of Trucks

**Hanch Says It Is Necessary Because  
Trucks Are Essential—Expect  
Steel Relief**

NEW YORK, Oct. 5—That a B3 priority rating for truck manufacturers would do much to put them in a position to get needed materials, and that the steel situation may change over night and be greatly relieved, were the two important matters which were brought before the meeting of the Motor Truck Committee of the National Automobile Chamber of Commerce on Thursday afternoon. There were 67 truck manufacturers in attendance, some of whom were not members of the N. A. C. C.

Charles C. Hanch, chairman of the Automotive Products Section of the War Industries Board, definitely recommended a B3 priority rating for truck manufacturers upon the plea that the truck is essential to both war and business, and for this reason the industry must be continued. He stated that in consequence of a careful review of appeals made by certain truck manufacturers from the curtailment order of the War Industries Board these makers had had their apportionments increased by approximately 50 per cent.

Hanch stated that he was not in a position to know the attitude of the Priorities Division with regard to the production of trucks after Jan. 1, 1919. He hoped, however, that by Dec. 1 of this year he would have a decision upon which, in conjunction with inventories filed by makers, to base an apportionment for the first 6 months of 1919. The production of new models will not be countenanced under any consideration, nor will the conduct of experimental work be looked upon with favor.

The statement that the steel situation may be very considerably relieved over night was made by George Graham, chairman of the Motor Truck Committee of the N. A. C. C. Such relief would hinge, according to information given Graham by a steel maker of international reputation, upon the advance of the Allies by so little a distance as 12 miles on certain fronts. Such an advance would put the Allies in possession of the richest ore mines in the world—mines which would take care of all the steel requirements of the Allies, thus releasing great quantities of steel for commercial use.

The chance for assemblers of motor trucks to obtain war orders is very much better to-day than it has been heretofore, stated Graham. This is due to the fact that companies which manufacture their own trucks, as distinct from those who purchase their parts and assemble trucks, are at present loaded up with practically all the Government work they can handle.

In summing up the work of the High-

ways Transport Committee, George Pride, Regional Director of the Eastern District of the Highways Transport Committee, quoted Food Commissioner Hoover upon the necessity of continuing the development of highway transportation. According to Hoover, he stated, there are 180,000,000 people in the world whose homes have been depleted by the war and who must be fed. He estimated that it will require 20 years to recover the balance of transportation through the use of animal power. He quoted Hoover further to the effect that because of lack of transportation 40 per cent of the potatoes grown never reach human beings—they either rot in the ground or are fed to hogs.

Colorado has been particularly active in highways transportation work, according to Pride. Shortly 50 speakers will leave Denver and cover every county of the state promoting highways transportation. In this connection Sam Miles stated that there are already 500 trucks in rural motor express service, and that Iowa leads all states in this work, there being 100 trucks operating out of Cedar Rapids alone.

Secretary of the Highways Industries Association Shirley urged the necessity of a uniform vehicle law to apply throughout the United States. He offered as his opinion that such a law would be in force in ten states within two years, and that within five years its adoption would be universal.

### No War Hospital at Chicago Speedway

CHICAGO, Oct. 7—Work of turning the Chicago Motor Speedway at Maywood into a permanent army hospital, which has been under way for several weeks, has been halted by the authorities at Washington. The plan for turning the plant into a reconstruction hospital for men maimed in the war was rejected yesterday, the War Industries Board recommending that the project be abandoned, although the Surgeon-General's office had asked that the plan be carried out. The War Department has accepted the view of the War Industries Board.

No official announcement has been made, but David F. Reid, president of the Speedway Park Association, learned that the project was held non-essential. Nearly 500 men have been working at the place for the past month, and labor and material costs on the reconstruction now amount to about \$250,000. It was proposed to build a 2500-bed hospital on the Speedway grounds, as well as several other buildings, the total cost estimated at \$2,500,000.

### New Amazon Cord Tire

AKRON, Oct. 7—The Amazon Rubber Co. is marketing a new type of cord tire under the trade name "Amazon Cord Supertire." The tire has a black tread and gray side wall and is made in these sizes: 34 x 4½, \$67.25; 36 x 4½, \$70.55; 35 x 5, \$83.60; 37 x 5, \$87.60; 36 x 6, \$109.50.

## Restrict Steel For Tractor Manufacture

**Makers May Use Only 25% of  
Quantity Used Last Year—The  
Complete Regulations**

WASHINGTON, Oct. 7—Under Government control curtailing the use of steel and iron in the farm tractor and farm equipment industry, which was announced in Motor World last week, new regulations were issued Sept. 30.

They provide that tractor manufacturers who produced and sold 50 or more tractors from Oct. 1, 1917, to Sept. 30, 1918, may not exceed 75 per cent of their consumption of iron and steel during that period in the 12 months from Oct. 1, 1918, to Sept. 30, 1919. Tractor makers who produced and had in field operation 10 tractors and not more than 50 tractors during the last year will not be allowed to produce over 50 tractors during the coming 12 months. Tractor manufacturers who produced less than 10 tractors in the last 12 months cannot produce more than 10 tractors during the year Oct. 1, 1918, to Sept. 30, 1919. Manufacturers of other farm equipment or machinery similar to farm tractors will also have to follow the above mentioned regulations.

The tractor and farm equipment industry consumed 2,000,000 tons of iron and steel during the 12 months ended Sept. 30, 1918, and it is expected that 500,000 tons will be saved for the direct war program by the curtailment.

Signed pledges will be demanded from the manufacturers to use the materials on hand or that come into their possession solely for the manufacture of tractors and farm equipment and parts, to reduce the tonnage of iron and steel as provided by the regulations, and to produce only the most essential farm equipment and parts, to distribute the products only for essential uses and to comply with the regulations of the War Industries Board for economies and substitutions.

Judge Parker, Priorities Commissioner, in a statement issued with the regulations, acknowledged that the farm tractor and implement industry is not only an essential but "an indirect war industry." He pointed out the urgent need for steel and iron for direct war needs at this time, however, and makes this the basis of the curtailment.

Following is the ruling of the Priorities Division:

Reference herein will be made to periods of 12 months each; that from October 1, 1917, to September 30, 1918, will be designated "First Period." A careful survey of your industry in connection with the urgent war requirements has led to the decision that in the public interest your iron and steel consumption for the "Second Period" should be 75 per cent of your consumption during the "First Period," when it approximated 2,000,000 tons of iron and steel.

The effect of a release of 25 per cent of your consumption during the past 12

months will be immediately felt on the war program. It is with confidence that the War Industries Board relies upon your indispensable industry lending the same whole-hearted and patriotic assistance in accomplishing these economies that it has always rendered in response to previous appeals. While the importance of your industry and your place in the program for the production of food for this nation and its allies can hardly be overstated, yet the supreme concern at this critical period is that every possible contribution be made *immediately* and enthusiastically to the end that the war may be shortened and the victory made decisive.

The necessity of reducing the allotments of iron and steel to your industry places upon you and the Farm Implements Committee the responsibility of so applying the curtailment that your more essential products shall be produced in sufficient quantities to meet all legitimate demands for them and that your less essential products shall be produced in greatly diminished quantities, or not at all. The Priorities Division does not undertake to direct you in the formulation or execution of a program of such responsibility. This is your problem. You are equipped to solve it, and with your experience and ripe judgment you will through team work so adjust your manufacturing program and utilize the curtailed allotment of materials that the theoretical injury may not prove real.

The plans for curtailment must among other things take account of the varying situation of the manufacturers who have been in production for considerable periods as contrasted with those whose production period has been relatively so short that they are still virtually in the experimental stage. To apply to both of such groups an arbitrary percentage tonnage allotment plan would be inequitable.

For your guidance you are advised that the Priorities Division has decided:

(a) That the tractor makers who have produced less than 10 tractors during the "First Period" are in the primary experimental stage, and that they are not to produce over 10 tractors during the "Second Period."

(b) That the tractor makers who have produced and had in field operation 10 or more, and less than 50, tractors during the "First Period" are in the secondary development stage, and that they are not to produce over 50 tractors during the "Second Period."

(c) The makers of products other than farm tractors whose development situation shall be comparable to those of the tractor makers described in the preceding paragraphs are to produce according to the same rules.

(d) That the tractor makers who have produced and sold 50 or more tractors during the "First Period" and all other manufacturers of farm operating equipment who are past their primary and secondary development stages will receive during the "Second Period" not exceeding 75 per cent of their consumption of iron and steel during the "First Period."

#### Pay Some Regal Creditors in Full

DETROIT, Oct. 7—All creditors of the Regal Motor Co. now in receivership, whose claims are secured by first mortgage gold notes of the company, will be paid in full, it is announced by the Securities Trust Co., receiver. It is estimated that unsecured creditors will receive from 20 per cent to 25 per cent of their claims. The public sale, together with the machinery taken over by the Government, amounted to \$541,347.25.

## Dealers May Get Cars After First of Year

### Sentiment at N. A. C. C. Meeting That Makers May Continue to Clean Up Inventories

NEW YORK, Oct. 3—Chairman Charles C. Hanch of the Automotive Products Section of the War Industries Board attended a meeting of the National Automobile Chamber of Commerce here today, and at its close the atmosphere was considerably clarified.

He made a long address before the manufacturers and repeated the statement that every effort should be made to get on a strictly war basis by the end of the year and that the factories may have until Jan. 1 to clean up their inventories. Sentiment among the manufacturers, however, is that they will be permitted to continue this cleaning up after Jan. 1 in case they do not get the job done before, and that there is a possibility that the dealers will get some cars during at least the early part of 1919. The production of parts will continue. In cleaning up inventories the ruling of some time ago stands, that production during the last half of this year must not exceed 25 per cent of 1917.

Of the 117 members 74 are now on war work, ranging from 25 to 100 per cent.

Hanch also took up the truck matter. Some time ago it was ruled that makers could produce during the last half of 1918 one-third of the production of the preceding 18 months. Some makers have, however, made this amount during the last 3 months, which would seem to shut them down entirely under the ruling. Hanch stated, however, that such makers would go on at the same ratio as allotted, but that this excess would be deducted from their 1919 allotment.

The traffic committee cited these figures as to carload shipments: August, 1917, 22,000; August, 1918, 13,631; September, 1917, 20,538; September, 1918, 12,000.

The members expressed themselves as in favor of any taxation which is not discriminatory.

One hundred companies were represented by 128 men, one of the largest meetings ever held.

#### Complaints Against Misleading Advertising

WASHINGTON, Oct. 2—Formal complaint has been filed against the Silvēx Co., South Bethlehem, Pa., manufacturers of spark plugs, by the Federal Trade Commission, which states that it has reason to believe the company has employed misleading advertising. The complaint alleges the Silvēx Co., following a test of its spark plugs by the United States Bureau of Mines, misrepresented in its advertising that the Bureau of Mines had "certified" the plugs. The concern is cited to appear

before the commission in Washington Nov. 13.

#### Y. M. C. A. Wants Mechanics

ST. LOUIS, Oct. 7—President Vesper, of the N. A. D. A., announces that automobile mechanics qualifying for work abroad under the Y. M. C. A. Transport Division will be paid a flat salary of \$50 a week, about half of which will be paid to their families and the remainder to the men to care for personal expenses. Men not in Class 1 of the draft are wanted. Men especially wanted are those who can straighten axles, fit bearings, repair magnetos, grind valves, adjust vibrators and test cut-outs. Ford men are especially desirable. They are warned that they will have hard work, long hours and must go prepared to endure hardships. They can enlist either through their local Y. M. C. A. or at the N. A. D. A. office at Grand Avenue and Lindell Boulevard, St. Louis.

#### F. T. C. Complaints of Similar Names

WASHINGTON, Oct. 7—Complaint against the "Auto Surplus Stock Co." has been made by the Federal Trade Commission, stating it has reason to believe that this name was adopted to confuse and mislead the trade and public into the belief that this concern was the same as the previously established Chicago firm, "Surplus Auto Supply Co." The commission names Bert Symonds, Genevieve Symonds and Irving Symonds as the three co-partners. The Symonds concern, the commission alleges, began business in Chicago within the last past year, while the Surplus Auto Supply Co. has been engaged in its business for 3 years. The concern was cited to appear before the commission in Washington Nov. 12.

#### Ohio Has 5000 Tractors

COLUMBUS, Oct. 7—Ohio has 5000 farm tractors in operation, against a few more than 2000 a year ago, says N. E. Shaw, Secretary of Agriculture. He expects to have his crop reporters make a survey to obtain the exact number. H. C. Ramsower and G. W. McCuen, professors of agricultural engineering, Ohio State University, who conducted numerous tractor demonstrations during the summer, say they believe Ohio is one of the banner tractor states of the country.

#### Canada Wants Parts Stocks

REGINA, SASK., Oct. 7—Automobile owners of Saskatchewan are about to ask legislation requiring a full line of automobile parts for all makes of cars to be carried in at least one place in the province so that they may be assured of securing repairs quickly when desired. They will also ask that a full line of parts for makes that have been withdrawn from the market be carried for at least 3 years.

There are now 46,000 automobiles in



# Buy Liberty Bonds



Saskatchewan, for many of which repairs and new parts could be obtained only with great difficulty and expense. It is claimed that with the probable great increase in automobile manufacture after the war there is likelihood of the country being flooded with new models and machines and old makes will be forced off the market because of the difficulty in obtaining repairs, unless there is legislation to prevent it.

## Open Bids for 25,000 "B" Trucks

WASHINGTON, Oct. 7—Bids for 25,000 Class B 3-ton war trucks have been received by the Motors Division of the U. S. Army, and opened Oct. 1. Announcement will be made shortly as to the distribution of the orders.

## Olds Will Make Liberty Engines

LANSING, Oct. 7—The Olds Motor Works will soon start production on its initial order of Liberty engines recently received from the Government. The first lot of 2000 kitchen trailers is expected to be delivered during this month. The production of passenger cars is slowly being diminished and the plant will be entirely on war work by Jan. 1.

## Dort Speeding War Work

FLINT, Oct. 7—The Dort Motor Car Co. will start production this month on its order for the Government for 1-ton trucks. Production on the new order for cargo trailers has been started and the company reports that 700 Government kitchen trailers have already been shipped.

## Goethals on War Industries Board

WASHINGTON, Oct. 5—Major General George W. Goethals, Assistant Chief of the General Staff, and Director of the Division of Purchase, Storage and Traffic, has been made a member of the War Industries Board. General Goethals takes the place on the Board formerly filled by his assistant, Brigadier General Hugh A. Johnson, who has been assigned to a field brigade for active service. General Johnson's position as assistant to General Goethals is being filled by Gerard Swope of New York.

## King to Make Kitchen Trailers

DETROIT, Oct. 7—Production on two-wheeled kitchen trailers for the Government will be started by the King Motor Car Co. about the middle of October. The company has received an order for 3000.

## Detroit Weatherproof Advances Prices

PONTIAC, MICH., Sept. 30—The Detroit Weatherproof Body Co. will advance its prices from \$97.50 to \$110 on Oct. 1.



A UNIQUE method of collecting used automobile tires for the benefit of the Red Cross was recently adopted in Austin, Tex. At the head of Congress Avenue, the principal business thoroughfare, and immediately in front of the State capitol, a wooden shaft of totem pole design was erected. Over the top of this pole second-hand automobile casings are thrown by contributors to the Red Cross.

The totem pole has already proved a big source of revenue to the cause. The plan of erecting this pole was conceived by the local Lions' Club, which bore the expense of putting the idea into effect. The pole stands seven feet tall, embedded in a cement base. It is carved from a solid piece of Texas white pine about 14 inches in diameter. Peter Mansbendel, who has achieved international fame for his wonderful wood carvings did the work.

The idea carried out in the designs is symbolical of American and Texas history. One one side is carved the Hun helmet, which rests at the bottom of the pole, with the American eagle crushing it in its talons. Supported by the American eagle is the head of an Eskimo, and above that is the head of the red man, typical of American and Texas primal inhabitants. At the top crouches a lion, symbol of the International Lions, with the shield and sign of the American Red Cross clutched in its paws.

The other side of the pole shows the same figures, with the exception of the

Hun helmet, which is supplanted by the American eagle alone, typifying the truth and power of America and the United States. Again, over all is the International Lions' symbol, clutching the shield and the symbol of the American Red Cross in its paws. On the opposite sides of the pole trails the prickly pear, a Texas product.

All the symbols are painted in appropriate colors to bring out the details of features.

## Car Makers Abandon Trucks

DETROIT, Oct. 7—Many passenger car manufacturers in this territory who some time ago announced their intention of entering the truck manufacturing field are obliged to change their programs owing to the Government's ruling relative to starting of new projects.

Among those affected in this territory are Paige, Oakland, Willys-Overland, Olds, Briscoe and Columbia—all passenger car builders. All of them went to more or less expense in preparing their plants for the production of truck models and now must lay aside these activities at least until the war is over. They will all concentrate their efforts on war work. Hardly is there a manufacturer but what has Government work in his plant.

Realizing during the summer that their production would be materially reduced many passenger car manufacturers sought to supply the deficiency by building trucks.

Nearly all these affected manufacturers, however, will preserve their plans—just stop where they are now—and as soon as the Government gives the word "go" it is their intention to continue from where they left off.

Practically all the truck manufacturers here are on Government work—that is, very little of their production is going to commercial fields. Federal has no trucks going to its dealers.

## Thrift Stamps for Battery Service

JACKSONVILLE, ILL., Oct. 7—Commencing with Oct. 1, when a car owner drives to the Wheeler & Sosrells garage to have his battery tested or filled with distilled water, the only payment for the service will be the requirement that he buy a thrift stamp. In some garages, this service has been given free, while in others, a small charge has been made. The Jacksonville firm has decided upon a unique patriotic plan which will have a tendency to increase the sale of these stamps, while there is no expense to the owner of the car for the service rendered. The customer keeps the stamp purchased and both dealer and patron have the satisfaction of contributing to the war work.

## Liberty Loan Work Going With a Whirl

### Dealers Plugging Hard and Lending Their Entire Resources— Chicago Nearly Over

MILWAUKEE, Oct. 5—Milwaukee dealers, garagemen and supply dealers, comprising Group 1 of the local committee on Fourth Liberty Loan, repeated the record established during the Third Liberty Loan campaign by being the first to reach its minimum quota, or \$160,000. By making a whirlwind campaign along the most scientific lines, the motor group was able to report 100 per cent on the third day of the present drive. The group is now making an effort to double the amount of subscriptions in order to earn another 100 per cent. mark.

Among the largest subscriptions made thus far is that of \$105,000 by the Ford Motor Co., through A. W. L. Gilpin, manager of the Milwaukee branch. This is the first time the Ford subscription has been distributed to reach Milwaukee. The American Automobile Co., Pierce-Arrow distributor; the LeRoi Co., maker of motors; Milwaukee branch, Kelly-Springfield Tire Co., each subscribed \$10,000.

Large subscriptions credited to other groups, but of interest to the trade, are: Harley-Davidson Motor Co., \$200,000; Briggs & Stratton Co., \$25,000; Shadbolt & Boyd Iron Co., jobber in accessories and supplies, \$25,000; Wadhams Oil Co., \$15,000.

### Chicago Nearly "Over"

CHICAGO, Oct. 7—With an original allotment of \$2,825,000, the Automobile and Accessory Division had subscribed for approximately \$2,000,000 in Fourth Liberty Loan Bonds to-night. The Branch House Division, lead by a Ford subscription of \$180,000, went over the top by \$80,000; Motor Truck Division led by Nelson & Le Moon with \$100,000 went over its quota by \$22,000; the Stewart Warner Speedometer Corp., with a firm subscription of \$100,000 and an employee subscription of \$125,000, leads the Accessory Division.

### What St. Louis is Doing

ST. LOUIS, Oct. 7—The sale of Liberty Loan Bonds in this community has been organized entirely without respect to trades, hence it is rather difficult to point out exactly what the trade is doing in this respect. Men most familiar with the general activities of the trade assert that "as a whole and individually, the motor men are doing their duty."

In the organization are a lot of motor car men from all divisions of the trade. Dealers have loaned their salesmen for an entire week's work. Usually, men of a trade are assigned to work in another district because of the belief that many business men do not like to discuss these matters with a business rival. So H. F. Fahrenkrog, manager of the Kardell Motor Car Co., sold bonds to doctors.

Phil Brockman of the De Luxe Motor Car Co. claimed that his establishment was the first business house to report 100 per cent. But there were many other motor firms soon after. The Hudson-Phillips was one of the first \$10,000 subscribers and this sale was increased later. But the records of the trade are carried in many precinct record books.

### Noise-Making Campaign

The trade contributed heavily to the noise making demonstrations. When the campaign was opened, practically all of the service cars in the city were equipped with bells and turned loose to use the bells and their horns on outlined routes. The Newell Motor Car Co., The De Luxe Motor Car Co., Vesper-Buick Auto Co. and other firms painted all of their show windows with Liberty Bond signs.

### Boston After Big Total

BOSTON, Oct. 5—The Boston motor trade is making a drive to put over a big Liberty Loan Subscription. A committee has been appointed and the motor district mapped out into squares, each under a captain, who directs the work in that territory. At the first meeting of the committee more than \$100,000 was pledged, two individual dealers taking \$25,000 worth each and some of the tire representatives agreeing to sell \$50,000 more. This time the tire men are working with the motor industry instead of with the rubber trade, as in the past. The committee hopes to make the trade 100 per cent before the drive is ended.

### New York Must Go Some

NEW YORK, Oct. 7—New York has got to go some. The Liberty Loan is lagging a bit but the dealers are working like beavers and before the end of the week expect to make a showing that will put some of the other cities in the shade. Up to date, of a quota of \$20,000,000, the trade has been instrumental in securing pledges of \$2,570,500, which leaves quite a lot still to get. Each day, some particular dealer's place of business is chosen for Liberty Loan headquarters, and all activities are centered at that place. So far the plan has worked well and the dealers are getting into their stride in great shape.

## Peake Asks Treasury for Help on Leases

### States That Dealers Who are Hard Hit Need Assistance in Handling Their Fixed Obligations

WASHINGTON, Oct. 7—The Treasury Department has been asked to assist in some way those dealers whose leases are made burdensome because of the business that has been cut from under the dealers by war restrictions of manufacturing. Executive Secretary E. E. Peake of the National Automobile Dealers Association made this request to-day but will not secure a definite answer until after further conferences.

On the question of mechanics, Provost Marshal Crowder stated to Peake that repairmen are not under the work-or-fight rule, neither are garage mechanics. Traveling salesmen are not included, but salesmen in showrooms are.

### Kansas City Lalley Distributer

KANSAS CITY, Oct. 7—The Lalley Sales Co., a corporation organized to distribute Lalley lights in Kansas City territory, formerly having headquarters on Southwest boulevard, is now located with the Hudson-Brace Motor Co., whose officers control the light corporation. The Hudson-Brace company is distributor for Hudson cars and Acme trucks. The light plants are not being handled wholesale with the idea that they are a side line however, since only dealers are being appointed who will push the sales. C. S. Todd is manager of the Lalley Sales Co.

### Cash for Cincinnati

CINCINNATI, O., Oct. 5.—At the regular weekly meeting of the Cincinnati Automotive Trades Association initial steps were taken to put the trade upon a strictly cash basis. A committee was appointed to secure the definite co-operation of men in the trade who are not now members of the association, with the understanding that when this shall have been effected, the cash basis plan will be adopted practically without opposition. The concurrence of the non-association dealers to the plan is said to be well assured.

### Peake Addresses Baltimore Dealers

BALTIMORE, Oct. 4—The Baltimore dealers were addressed last evening by Executive Secretary E. E. Peake of the National Automobile Dealers Association and it is stated that the majority of those not now members of the N. A. D. A. will join soon. About 90 dealers were present.



# Buy Liberty Bonds





## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

Eugene I. Danaher, who was secretary of the Newell Motor Car Co., St. Louis, until he entered the army as a private, has been made a lieutenant in the field artillery branch.

C. E. Mouselle of the Willard storage battery headquarters staff has been made district manager with headquarters in St. Louis.

F. M. Moore, for several years manager of the Firestone Tire & Rubber Co. branch at St. Louis, has been transferred to Columbus, O. He is succeeded at St. Louis by F. C. Rudisell, manager of the Omaha branch.

John H. Ellis, recently with the Cadillac sales staff at Des Moines, has been named sales manager for the Biddle Motor Sales Co. at St. Louis, in which city he began automobile selling.

E. Roy Stewart, for several years manager of wholesale sales for the Vesper-Bulck Auto Co., St. Louis, has joined the Southwest Nash Motor Co. staff as district representative for the Nash truck. Charles E. Ketcham, traveler, has been promoted to Mr. Stewart's place with the Vesper-Bulck Co.

John C. Toomey, for many years connected with the distributing department of the United States Tire Co., has joined L. A. Young Industries, Inc., Detroit, in the capacity of district manager.

J. B. Sweeney, formerly assistant advertising manager of the Paige-Detroit Motor Car Co., has associated himself with the advertising department of the Firestone Tire & Rubber Co., Akron.

H. S. Ketcham has resigned as New England district sales manager for the Cleveland Tractor Co. and becomes Southeastern and Southwestern district sales manager for the Heath Duplex division of the McCord Mfg. Co., Detroit.

F. N. Morgan has been appointed district manager for the Southwest for the Cleveland Tractor Co., Cleveland. His headquarters will be in the Colcord Building, Oklahoma City.

B. F. Swanson has been appointed district manager for the Cleveland Tractor Co., Cleveland, with offices in the Plymouth Building, Minneapolis. He will cover Minnesota, Montana, North Dakota and South Dakota, except Clay and Union counties, and including several counties in northwestern Wisconsin and northwestern Iowa.

C. W. Holloway has been appointed district manager for the Cleveland Tractor Co., Cleveland, for the Southeast, with headquarters in the Healey Building, Atlanta. He will cover Georgia, Alabama, Florida, North and South Carolina and Tennessee, east of the Tennessee River.

T. H. Pearsall has been appointed district manager for the Cleveland Tractor Co., Cleveland, with headquarters in the Peoples Gas Building, Chicago. He will cover Illinois, Wisconsin, Iowa and Missouri.

D. B. Groce, who has been truck and city salesman for the Columbus branch of the Firestone Tire & Rubber Co., has been promoted to the management of the truck tire sales department. William B. Alexander, who has been manager of the Columbus branch, has been promoted to the management of the branch at Omaha.

R. D. Hawley, who has been manager of the Studebaker Sales Co. of Columbus, has been promoted to manager of Studebaker branches in Ohio, Pennsylvania, West Virginia and New York.

G. D. Jones has been appointed sales engineer of the Cleveland Tractor Co., Cleveland, and will have charge of experimental work in developing plans and methods for increasing the Cleveland tractor's efficiency in its application to already known lines of utility and to increasing its field of usefulness.

### Aids Less Essential Firms

WASHINGTON, Oct. 7—Legislation to authorize the war finance corporation to loan money to less essential industries which the Government has forced to curtail business during the war may be recommended to Congress soon by Secretary McAdoo. Amendments to the war finance corporation act to broaden the powers of the corporation in this and other respects have been drafted by Treasury advisers and are under discussion with directors of the corporation and members of Congress. Most officials have agreed that the Government should extend financial aid of the curtailed industries to preserve them for after-the-war activity and minimize the general business disturbance at this time.

### Servant or Man?

(Continued from page 15)

value for the price demanded of the customer and get a price that lets us make a profit.

"We have always run this business on the plan that we must add a certain percent to our costs in order to make a profit. If we don't do that we can't stay in business, and we've got to stay in business or admit ourselves to be a failure. That we'll never do as long as there is a fighting man or woman left in the organization—and I think you're all with me on that.

"Furthermore, we want the reputation of giving the most gentlemanly, courteous service in Callawassa. We want people to remark on how friendly a greeting and good-bye they get when they visit our place. We want to make them like to come here, because the more people there are who like to come here the more business we shall do and the more money we shall all make.

"The better the profits of the company the better salaries we can pay, and the better service we give the better will be our profits. The whole thing is so closely linked together that there is no place at all in the scheme for the tipster or tiptaker.

"I have wondered how you people felt about it, and in order to ask you I've tried to set the sentiment down in a little sign which I'd like to see hung in several places about the building where our customers could see it. I thought it would be a fine thing if every person in the organization would put his or her own pen and ink signature on these signs so folks could know it was yourselves and not the company alone that stood back of the sentiment.

Reilly read the sign, and then there was a few seconds of silence. And then Teddy, who swept the shop floor and opened the doors, stepped out and said:

"Could I be the first to sign, Mr. Reilly?"

## Reiss, Hupmobile Man, Retiring From Trade

### Relinquishes His Agency, Which is Merged With Marmon—Sales- rooms Consolidated

NEW YORK, Oct. 7—Charles E. Reiss & Co., Hupmobile distributor, is shortly to retire from the automobile trade, the company's sales and maintenance business having been taken over by the Marmon Automobile Co. of New York. The sales and service staffs of the two companies will be consolidated and all business will be carried on from the present Marmon headquarters.

Charles E. Reiss, who has for years been one of the prominent figures in the New York automobile trade, is retiring to take up important Government work and will sever all connection with the automobile trade. Reiss has represented the Hupmobile in Metropolitan territory since 1912, and latterly moved in a new sales and service building which was especially designed for him and which was one of the most beautiful on Broadway. The Reiss company has also been distributor in this territory for Carlisle cord tires, and this business, too, has been disposed of. It will be continued by a new company to be styled Carlisle Cord Tire Sales Co.

### Grippe Hits Boston Trade

BOSTON, Oct. 5—Spanish influenza began taking its toll from among the automobile trade here this week. I. A. Howell, president of the Howell Motor Co., agent for the Liberty car, who had been ill for some time was the first to die. Philip Hawley, formerly manager of the Studebaker branch, and later of the Hawley-Cowan Co., New England distributors for Saxon cars also died. H. R. Cox, who came here from Rochester, N. Y., to take charge of the Bearings Service Co., was the third to go within the week. A number of men in the mechanical departments of the motor stations have been very ill and some of them died. The trade has been very hard hit. John H. Johnson, of the Buick, who was the big factor in putting over the big drive for members for the N. A. D. A., caught cold at a Liberty Loan meeting, and he hurried away to Poland Springs, Me., for a bit of recuperation.

### Chester Campbell is Dined

BOSTON, MASS., Oct. 5—Chester I. Campbell, secretary of The Boston Automobile Dealers' Association, who is now working for Uncle Sam on some big expositions, was given a complimentary banquet here a few nights ago at the Hotel Lenox. There were about 200 present. President J. H. MacAlman of the Boston Automobile Dealers' Association, presided, and after paying high tribute to Campbell he introduced a number of prominent Bostonians, who also had goods things to say for the guest.

# MOTOR WORLD GUIDE

## Farm Lighting and Power Plants

Name	Capacity, Kw.	Cylinder Dimensions	Cooling	Control	Price	Name	Capacity Kw.	Cylinder Dimensions	Cooling	Control	Price
<b>Alamo</b> .....	1	.....	.....	Automatic	\$450	<b>Graelectric (4)</b> .....	1½	No engine furnished	.....	.....	490†
<b>Delco-Light</b> .....	¾	2½x5	Air	Automatic	425*	<b>Homelite</b> .....	¾	.....	.....	Automatic	325†
<b>Delco-Light</b> .....	3	3¾x6	Air	Automatic	900*	<b>Jupiter</b> .....	¾	No engine furnished	.....	.....	335†
<b>Dyneto</b> .....	¾	.....	Water	Automatic	340*	<b>Kewancee</b> .....	¾	.....	Water	Automatic	430
<b>Empire</b> .....	1	.....	.....	Automatic	395	<b>Lalley-Light</b> .....	1	2½x2	Water	Automatic	475
<b>Fairbanks-Morse</b> .....	.....	.....	Water	Automatic	.....	<b>Perfection</b> .....	1½	.....	.....	Automatic	550
<b>Genco-Light</b> .....	¾	.....	Water	Automatic	.....	<b>Universal§</b> .....	¾	.....	Water	Automatic	.....
<b>Graelectric (1)</b> .....	¾	No engine furnished	.....	.....	160†	<b>Universal**</b> .....	4	.....	.....	Crank	.....
<b>Graelectric (2)</b> .....	½	No engine furnished	.....	.....	220†	<b>Western Electric</b> .....	1½	.....	Air	Automatic	.....
<b>Graelectric (3)</b> .....	¾	No engine furnished	.....	.....	290†						

\*Larger batteries to be had at higher prices. †Not including engine. §Universal Battery Co. \*\*Universal Motor Co.

### Production of Tractors Forced Down

CHICAGO, Oct. 7—A marked reduction in the number of tractors to be produced during the twelve months, Sept. 30, 1918 and Oct. 1, 1919, will follow the ruling of the Priorities Division of the War Industries Board that the supply of iron and steel available for tractor production during the period indicated must be 25 per cent less than that available during the twelvemonth period preceding.

This will result not only in forcing a reduction in the number of tractors which were planned and estimated for the ensuing year, but will cut the production actually below what was attained during the last year. This is the serious aspect of the ruling.

A carefully compiled estimate of what tractor manufacturers hoped and planned to do during 1919, based upon figures gathered very recently, indicated a probable production of approximately 200,000 tractors for the season. A reduction of 25 per cent from this estimate still would have left 150,000 machines available. This would have been a very considerable number and would have been in excess of the total production for 1918.

However, the ruling of the Priorities Division leaves no hope of reaching this number, since the reduction to be made is not upon estimates for the future, but upon what actually had been attained in the past, and this will mean a production for 1919 less by a considerable number than that of 1918, unless special concession of some kind can be secured.

The sort of special concession meant is that which has been accorded truck manufacturers who have on hand a supply of material which will enable them to turn out more trucks than would be their proportion if they had to buy materials now. The same situation may exist here and there in the tractor business. As a

matter of fact, the unknown quantity in the present situation consists of just this problematical fact.

Whatever this may turn out to be, however, or whatever special concessions may be granted, the production of tractors for the coming twelve months will fall far below what tractor manufacturers had hoped to produce and what, until the last few days, they had every right to believe they would produce.

### Motor Truck Owners' Association Formed

KANSAS CITY, Oct. 7—R. D. Sangster, transportation commissioner of the Chamber of Commerce, called a meeting Saturday, Oct. 5, to discuss Highways Transport—and the immediate result was definite steps to organize a motor truck owners' association, to establish a Return Load Bureau, to complete locally the organization of the Highways Transport Committees, to bring about full co-operation among various civic and war enterprises.

The Chamber of Commerce has been working on the motor truck transportation matter for a year; much data is at hand with reference to city-street transportation, and material is prepared for securing a survey of the territory's use of motor trucks.

While these matters were being developed, many other phases of the Highways Transport problem had developed, and it was thought best to bring together as soon as possible the various interests that would be affected by increased motor truck use. A group of men attended representing the following interests:

Transportation department, Chamber of Commerce.

Railroads, freight department.

Kansas City Motor Car Dealers Association.

Kansas City Automobile Club.

Team and Truck Owners' Association.

Truck owners not identified with any association.

Jackson County Council of Defense.

## Coming Events

### Conventions

La Salle, Ill.....	Garage Owners and Automobile Dealers' Assn. of Ill.....	Oct. 11-12
Chicago, Ill.....	Convention.....	Oct. 28-Nov. 2
	National Association of Automobile Accessory Jobbers.....	
Akron, O.....	Annual, Firestone Tire & Rubber Co.....	Dec. 5-6

### Expositions

Birmingham, Ala.....	State Fair.....	Oct. 1-12
Kansas City, Mo.....	American Royal.....	Oct. 7-12
Richmond, Va.....	State Fair.....	Oct. 7-14
Atlanta, Ga.....	Eastern State Fair and Automotive Exhibition.....	Oct. 12-19
Dallas, Tex.....	Seventh Annual Texas Automobile Show.....	Oct. 14-27
	Texas State Fair.....	
Macon, Ga.....	State Fair.....	Oct. 30-Nov. 9
Shreveport, La.....	State Fair.....	Oct. 28-Nov. 4

# MOTOR WORLD GUIDE

TIRE				TIRE				TIRE				TIRE						
Name and Model	Tons Capacity	Class Price	Cylinder Bore	Name and Model	Tons Capacity	Class Price	Cylinder Bore	Name and Model	Tons Capacity	Class Price	Cylinder Bore	Name and Model	Tons Capacity	Class Price	Cylinder Bore			
A & E 3T 3	3	4-51x4 48x3d	36x3	Callier	M 4	985	4-31x5 32x4	32x4	Garford	68 6	5000	4-41x5 36x6	40x6d	Independent	F 1	1485	4-41x5 34x3	34x4
A & E 5T 5	5	4-51x4 48x3d	36x3	Columbia	E 2	2775	4-41x5 36x4	36x4	Garford	69 6	5300	4-51x5 36x6	40x7d	Independent	G 2	2250	4-41x5 34x3	34x4
Acme	1 1/2	2500	4-31x5 36x3	Commerce	E 1	1450	4-31x5 36x3	36x4	Garford Tractor	10 6	3400	4-41x5 36x4	36x7	Indiana	1	1075	4-41x5 34x3	34x4
Acme	2	2850	4-41x5 36x4	Concord	A 1 1/2	2350	4-31x5 36x3	36x5	Garford Tractor	11 7	4400	4-41x5 36x5	40x6d	Indiana	2	2000	4-41x5 36x4	36x5
Acme	3	3650	4-41x5 36x5	Concord	B 3 1/2	2850	4-41x5 36x4	36x5d	Garford Tractor	12 8	5100	4-51x5 36x6	40x6d	Indiana	3	2800	4-41x5 36x4	36x7
Acme	4	4700	4-41x5 36x6	Concord	H 1	.....	4-31x4 31x4	31x4	Gary	F 1	.....	4-31x5 36x3	36x4	Indiana	4	3450	4-41x5 36x5	36x5d
Acme	5	2850	4-41x5 36x5	Concord	E 1	2000	4-31x5 36x3	36x4	Gary	G 1 1/2	.....	4-41x5 36x4	36x5	International Harv.	H 1	1550	4-41x5 36x3	36x3
Acme	6	2850	4-41x5 36x4	Concord	E 1 1/2	2400	4-31x5 36x3	36x4	Gary	H 2	.....	4-41x5 36x4	36x5	International Harv.	H 2	1650	4-41x5 36x3	36x3
Acme	7	2850	4-41x5 36x5	Concord	E 2	3000	4-41x5 36x4	36x4d	Gary	H 3	.....	4-41x5 36x4	36x5d	International Harv.	H 3	1800	4-41x5 36x3	36x3
Acme	8	3450	4-41x5 36x5	Concord	E 3	3200	4-41x5 36x4	36x4d	Gary	H 4	.....	4-41x5 36x4	36x5d	International Harv.	H 4	2000	4-41x5 36x3	36x3
Acme	9	4000	4-41x5 36x5	Concord	E 4	4000	4-41x5 36x4	36x4d	Gary	H 5	.....	4-41x5 36x4	36x5d	International Harv.	H 5	2200	4-41x5 36x3	36x3
Acme	10	4700	4-41x5 36x6	Concord	E 5	4500	4-41x5 36x5	36x5d	Gary	H 6	.....	4-41x5 36x4	36x5d	International Harv.	H 6	2400	4-41x5 36x3	36x3
Acme	11	5100	4-41x5 36x6	Concord	E 6	5000	4-41x5 36x6	36x6d	Gary	H 7	.....	4-41x5 36x4	36x5d	International Harv.	H 7	2600	4-41x5 36x3	36x3
Acme	12	5500	4-41x5 36x6	Concord	E 7	5500	4-41x5 36x6	36x6d	Gary	H 8	.....	4-41x5 36x4	36x5d	International Harv.	H 8	2800	4-41x5 36x3	36x3
Acme	13	5900	4-41x5 36x6	Concord	E 8	6000	4-41x5 36x6	36x6d	Gary	H 9	.....	4-41x5 36x4	36x5d	International Harv.	H 9	3000	4-41x5 36x3	36x3
Acme	14	6300	4-41x5 36x6	Concord	E 9	6500	4-41x5 36x6	36x6d	Gary	H 10	.....	4-41x5 36x4	36x5d	International Harv.	H 10	3200	4-41x5 36x3	36x3
Acme	15	6700	4-41x5 36x6	Concord	E 10	7000	4-41x5 36x6	36x6d	Gary	H 11	.....	4-41x5 36x4	36x5d	International Harv.	H 11	3400	4-41x5 36x3	36x3
Acme	16	7100	4-41x5 36x6	Concord	E 11	7500	4-41x5 36x6	36x6d	Gary	H 12	.....	4-41x5 36x4	36x5d	International Harv.	H 12	3600	4-41x5 36x3	36x3
Acme	17	7500	4-41x5 36x6	Concord	E 12	8000	4-41x5 36x6	36x6d	Gary	H 13	.....	4-41x5 36x4	36x5d	International Harv.	H 13	3800	4-41x5 36x3	36x3
Acme	18	8400	4-41x5 36x6	Concord	E 13	8800	4-41x5 36x6	36x6d	Gary	H 14	.....	4-41x5 36x4	36x5d	International Harv.	H 14	4000	4-41x5 36x3	36x3
Acme	19	9300	4-41x5 36x6	Concord	E 14	9300	4-41x5 36x6	36x6d	Gary	H 15	.....	4-41x5 36x4	36x5d	International Harv.	H 15	4200	4-41x5 36x3	36x3
Acme	20	10200	4-41x5 36x6	Concord	E 15	9800	4-41x5 36x6	36x6d	Gary	H 16	.....	4-41x5 36x4	36x5d	International Harv.	H 16	4400	4-41x5 36x3	36x3
Acme	21	11100	4-41x5 36x6	Concord	E 16	10300	4-41x5 36x6	36x6d	Gary	H 17	.....	4-41x5 36x4	36x5d	International Harv.	H 17	4600	4-41x5 36x3	36x3
Acme	22	12000	4-41x5 36x6	Concord	E 17	10800	4-41x5 36x6	36x6d	Gary	H 18	.....	4-41x5 36x4	36x5d	International Harv.	H 18	4800	4-41x5 36x3	36x3
Acme	23	12900	4-41x5 36x6	Concord	E 18	11300	4-41x5 36x6	36x6d	Gary	H 19	.....	4-41x5 36x4	36x5d	International Harv.	H 19	5000	4-41x5 36x3	36x3
Acme	24	13800	4-41x5 36x6	Concord	E 19	11800	4-41x5 36x6	36x6d	Gary	H 20	.....	4-41x5 36x4	36x5d	International Harv.	H 20	5200	4-41x5 36x3	36x3
Acme	25	14700	4-41x5 36x6	Concord	E 20	12300	4-41x5 36x6	36x6d	Gary	H 21	.....	4-41x5 36x4	36x5d	International Harv.	H 21	5400	4-41x5 36x3	36x3
Acme	26	15600	4-41x5 36x6	Concord	E 21	12800	4-41x5 36x6	36x6d	Gary	H 22	.....	4-41x5 36x4	36x5d	International Harv.	H 22	5600	4-41x5 36x3	36x3
Acme	27	16500	4-41x5 36x6	Concord	E 22	13300	4-41x5 36x6	36x6d	Gary	H 23	.....	4-41x5 36x4	36x5d	International Harv.	H 23	5800	4-41x5 36x3	36x3
Acme	28	17400	4-41x5 36x6	Concord	E 23	13800	4-41x5 36x6	36x6d	Gary	H 24	.....	4-41x5 36x4	36x5d	International Harv.	H 24	6000	4-41x5 36x3	36x3
Acme	29	18300	4-41x5 36x6	Concord	E 24	14300	4-41x5 36x6	36x6d	Gary	H 25	.....	4-41x5 36x4	36x5d	International Harv.	H 25	6200	4-41x5 36x3	36x3
Acme	30	19200	4-41x5 36x6	Concord	E 25	14800	4-41x5 36x6	36x6d	Gary	H 26	.....	4-41x5 36x4	36x5d	International Harv.	H 26	6400	4-41x5 36x3	36x3
Acme	31	20100	4-41x5 36x6	Concord	E 26	15300	4-41x5 36x6	36x6d	Gary	H 27	.....	4-41x5 36x4	36x5d	International Harv.	H 27	6600	4-41x5 36x3	36x3
Acme	32	21000	4-41x5 36x6	Concord	E 27	15800	4-41x5 36x6	36x6d	Gary	H 28	.....	4-41x5 36x4	36x5d	International Harv.	H 28	6800	4-41x5 36x3	36x3
Acme	33	21900	4-41x5 36x6	Concord	E 28	16300	4-41x5 36x6	36x6d	Gary	H 29	.....	4-41x5 36x4	36x5d	International Harv.	H 29	7000	4-41x5 36x3	36x3
Acme	34	22800	4-41x5 36x6	Concord	E 29	16800	4-41x5 36x6	36x6d	Gary	H 30	.....	4-41x5 36x4	36x5d	International Harv.	H 30	7200	4-41x5 36x3	36x3
Acme	35	23700	4-41x5 36x6	Concord	E 30	17300	4-41x5 36x6	36x6d	Gary	H 31	.....	4-41x5 36x4	36x5d	International Harv.	H 31	7400	4-41x5 36x3	36x3
Acme	36	24600	4-41x5 36x6	Concord	E 31	17800	4-41x5 36x6	36x6d	Gary	H 32	.....	4-41x5 36x4	36x5d	International Harv.	H 32	7600	4-41x5 36x3	36x3
Acme	37	25500	4-41x5 36x6	Concord	E 32	18300	4-41x5 36x6	36x6d	Gary	H 33	.....	4-41x5 36x4	36x5d	International Harv.	H 33	7800	4-41x5 36x3	36x3
Acme	38	26400	4-41x5 36x6	Concord	E 33	18800	4-41x5 36x6	36x6d	Gary	H 34	.....	4-41x5 36x4	36x5d	International Harv.	H 34	8000	4-41x5 36x3	36x3
Acme	39	27300	4-41x5 36x6	Concord	E 34	19300	4-41x5 36x6	36x6d	Gary	H 35	.....	4-41x5 36x4	36x5d	International Harv.	H 35	8200	4-41x5 36x3	36x3
Acme	40	28200	4-41x5 36x6	Concord	E 35	19800	4-41x5 36x6	36x6d	Gary	H 36	.....	4-41x5 36x4	36x5d	International Harv.	H 36	8400	4-41x5 36x3	36x3
Acme	41	29100	4-41x5 36x6	Concord	E 36	20300	4-41x5 36x6	36x6d	Gary	H 37	.....	4-41x5 36x4	36x5d	International Harv.	H 37	8600	4-41x5 36x3	36x3
Acme	42	30000	4-41x5 36x6	Concord	E 37	20800	4-41x5 36x6	36x6d	Gary	H 38	.....	4-41x5 36x4	36x5d	International Harv.	H 38	8800	4-41x5 36x3	36x3
Acme	43	30900	4-41x5 36x6	Concord	E 38	21300	4-41x5 36x6	36x6d	Gary	H 39	.....	4-41x5 36x4	36x5d	International Harv.	H 39	9000	4-41x5 36x3	36x3
Acme	44	31800	4-41x5 36x6	Concord	E 39	21800	4-41x5 36x6	36x6d	Gary	H 40	.....	4-41x5 36x4	36x5d	International Harv.	H 40	9200	4-41x5 36x3	36x3
Acme	45	32700	4-41x5 36x6	Concord	E 40	22300	4-41x5 36x6	36x6d	Gary	H 41	.....	4-41x5 36x4	36x5d	International Harv.	H 41	9400	4-41x5 36x3	36x3
Acme	46	33600	4-41x5 36x6	Concord	E 41	22800	4-41x5 36x6	36x6d	Gary	H 42	.....	4-41x5 36x4	36x5d	International Harv.	H 42	9600	4-41x5 36x3	36x3
Acme	47	34500	4-41x5 36x6	Concord	E 42	23300	4-41x5 36x6	36x6d	Gary	H 43	.....	4-41x5 36x4	36x5d	International Harv.	H 43	9800	4-41x5 36x3	36x3
Acme	48	35400	4-41x5 36x6	Concord	E 43	23800	4-41x5 36x6	36x6d	Gary	H 44	.....	4-41x5 36x4	36x5d	International Harv.	H 44	10000	4-41x5 36x3	36x3
Acme	49	36300	4-41x5 36x6	Concord	E 44	24300	4-41x5 36x6	36x6d	Gary	H 45	.....	4-41x5 36x4	36x5d	International Harv.	H 45	10200	4-41x5 36x3	36x3
Acme	50	37200	4-41x5 36x6	Concord	E 45	24800	4-41x5 36x6	36x6d	Gary	H 46	.....	4-41x5 36x4	36x5d	International Harv.	H 46	10400	4-41x5 36x3	36x3
Acme	51	38100	4-41x5 36x6	Concord	E 46	25300	4-41x5 36x6	36x6d	Gary	H 47	.....	4-41x5 36x4	36x5d	International Harv.	H 47	10600	4-41x5 36x3	36x3
Acme	52	39000	4-41x5 36x6	Concord	E 47	25800	4-41x5 36x6	36x6d	Gary	H 48	.....	4-41x5 36x4	36x5d	International Harv.	H 48	10800	4-41x5 36x3	36x3
Acme	53	39900	4-41x5 36x6	Concord	E 48	26300	4-41x5 36x6	36x6d	Gary	H 49	.....	4-41x5 36x4	36x5d	International Harv.	H 49	11000	4-41x5 36x3	36x3
Acme	54	40800	4-41x5 36x6	Concord	E 49	26800	4-41x5 36x6	36x6d	Gary	H 50	.....	4-41x5 36x4	36x5d	International Harv.	H 50	11200	4-41x5 36x3	36x3
Acme	55	41700	4-41x5 36x6	Concord	E 50	27300	4-41x5 36x6	36x6d	Gary	H 51	.....	4-41x5 36x4	36x5d	International Harv.	H 51	11400	4-41x5 36x3	36x3
Acme	56	42600	4-41x5 36x6	Concord	E 51	27800	4-41x5 36x6	36x6d	Gary	H 52	.....	4-41x5 36x4	36x5d	International Harv.	H 52	11600	4-41x5 36x3	36x3
Acme	57	43500	4-41x5 36x6	Concord	E 52	28300	4-41x5 36x6	36x6d	Gary	H 53	.....	4-41x5 36x4	36x5d	International Harv.	H 53	11800	4-41x5 36x3	36x3
Acme	58	44400	4-41x5 36x6	Concord	E 53	28800	4-41x5 36x6	36x6d	Gary	H 54	.....	4-41x5 36x4	36x5d	International Harv.	H 54	12000	4-41x5 36x3	36x3
Acme	59	45300	4-41x5 36x6	Concord	E 54	29300	4-41x5 36x6	36x6d	Gary	H 55	.....	4-41x5 36x4	36x5d	International Harv.	H 55	12200	4-41x5 36x3	36x3
Acme	60	46200	4-41x5 36x6	Concord	E 55	29800	4-41x5 36x6	36x6d	Gary	H 56	.....	4-41x5 36x4	36x5d	International Harv.	H 56	12400	4-41x5 36x3	36x3
Acme	61	47100	4-41x5 36x6	Concord	E 56	30300	4-41x5 36x6	36x6d	Gary	H 57	.....	4-41x5 36x4	36x5d	International Harv.	H 57	12600	4-41x5 36x3	36x3
Acme	62	48000	4-41x5 36x6	Concord	E 57	30800	4-41x5 36x6	36x6d	Gary	H 58	.....	4-41x5 36x4	36x5d	International Harv.	H 58	12800	4-41x5 36x3	36x3
Acme	63	48900	4-41x5 36x6															

[illegible]

## MERCHANDISING SPECIFICATIONS

THE tables which appear on these pages have been prepared with the thought of assisting the salesman in the merchandising of passenger cars and commercial vehicles. The data have been limited to those facts which the average salesman finds necessary for comparative purposes and as sales ammunition.

The tables will be corrected and revised down to date every week.

They will be supplemented by others from week to week, intended solely for the garageman and repairman who has the maintenance of passenger cars and commercial vehicles as his work.

Passenger  
Cars

## MOTOR WORLD GUIDE

Passenger  
Cars

Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2- Pass.	5- Pass.	7- Pass.
ALLEN Series 41	4-31x5	Conn	A-Lite	112	32x3 1/2	SS	11145	\$1195	...
AMERICAN B	6-31x5	A-Kent	West	122	32x4	SS	1645	1695	1695
ANDERSON 20	6-31x4 1/2	Conn	Wetha	120	33x4	SS	**1465	...	...
ANDERSON 40	6-31x5 1/2	Boech	Wetha	120	33x4	SS	**1925	...	...
APPERSON F	8-31x5	Remy	Bijur	130	34x4	SS	12850	...	2800
ANNIVERSARY AUBURN	6-31x4 1/2	Remy	Bijur	120	34x4	SS	1595	1595	1595
AUBURN 6-30-B	6-31x5 1/2	Delco	Delco	131	35x4 1/2	SS	...	1785	1785
BUDDLE H	4-31x5 1/2	Edman	G & D	121	32x4	QDR	2700	...	12750
BRISCOE B4-24	4-31x5 1/2	Conn	A-Lite	104	30x3 1/2	C	885	885	...
BUICK E4-34-35	4-31x4 1/2	Delco	Delco	106	31x4	C	795	795	...
BUICK E4-45	6-31x4 1/2	Delco	Delco	118	34x4	SS	1265	1265	...
BUICK E-49	6-31x4 1/2	Delco	Delco	124	34x4 1/2	SS	...	1495	...
CADILLAC 57	8-31x5 1/2	Delco	Delco	125	35x5	SS	3520	3520	3520
CASE U	6-31x5 1/2	Wetha	Wetha	125	35x4 1/2	SS	11875	1875	1875
CHALMERS 6-30	6-31x4 1/2	Remy	Wetha	117	32x4	SS	1565	1565	1615
CHANDLER	6-31x5	Boech	Wetha	123	34x4	SS	11765	11875	1795
CHEVROLET 490	4-31x4 1/2	Remy	A-Lite	102	30x3 1/2	C	715	735	...
FA D	8-31x4 1/2	Remy	A-Lite	108	33x4	SS	995	995	...
COLE 870	8-31x4 1/2	Delco	Delco	127	33x5	SS	2595	2595	2595
COLUMBIA C&D	6-31x4 1/2	A-Kent	W-Lard	115	32x4	...	11595	1550	...
CROW-ELKHART CE-36	4-31x5	Conn	Dyneto	114	32x3 1/2	SS	1095	1155	1095
DANIELS B	8-31x5	Wetha	Wetha	127	34x4 1/2	QDR	3500	3500	3500
DAVIS H.I.	6-31x4 1/2	Delco	Delco	119	34x4	...	1685	1685	...
J.I.	6-31x5 1/2	Delco	Delco	125	34x4 1/2	...	2060	2050	...
DIXIE FLYER LS5	4-31x5	Conn	Dyneto	112	32x3 1/2	SS	1095	1095	...
DODGE BROTHERS	4-31x4 1/2	Own	N.E.	114	32x3 1/2	SS	985	985	...
DORRIS 6-80	6-4 x5	Boech	Wetha	132	33x5	SS	...	3500	...
DORT 11	4-31x5	Conn	Wetha	105	30x3 1/2	QD	925	925	...
ELGAR D.F.	4-31x5	A-Kent	Dyneto	116	33x4	SS	...	1175	1175
ELGIN H	6-31x4 1/2	A-Kent	Dyneto	116	33x4	...	...	1375	1375
ELGIN H	6-31x4 1/2	Remy	Wagner	118	33x4	...	11985	1395	...
EMPIRE 60-51	4-31x5	Conn	A-Lite	115	33x4	SS	1165	1125	...
72	6-31x4 1/2	Conn	A-Lite	120	34x4	SS	...	1446	1475
73	...	...	...	...	...	...	...	11960	...
ESSEX	4-31x5	Wetha	Delco	108 1/2	32x4	...	...	1395	...
FORD T	4-31x4	Own	...	100	30x3 1/2	C	500	525	...
FRANKLIN 9	6-31x4	A-Kent	Dyneto	115	33x4 1/2	SS	2850	2900	2900
GRANT G	6-3 x4 1/2	Remy	Wagner	114	32x3 1/2	...	11245	1245	...
HARROUN	4-31x5 1/2	A-Kent	Remy	106	30x3 1/2	...	...	995	...
HAYNES 39	6-31x5	Remy	L-N	127	35x4 1/2	SS	11950	1900	1950
44	12-21x5	Delco	L-N	127	34x4 1/2	SS	12910	...	2910
HOLLIER 206	6-31x4 1/2	Remy	Splitdr	116	32x4	SS	1485	...	...
188	8-3 x4 1/2	A-Kent	Splitdr	116	34x4	SS	11385	1385	...
HUDSON Super-6	6-31x5	Delco	Delco	125 1/2	34x4 1/2	SS	...	12200	2200
HUPMOBILE R	4-31x5 1/2	A-Kent	Bijur	112	32x4	...	1500	1500	...
JACKSON 349	8-3 x3 1/2	A-Lite	A-Lite	118	34x4	SS	11495	1495	1570
JORDAN J-60	6-31x5 1/2	Delco	Bijur	127	33x4 1/2	SS	...	12775	12775
KING F	8-3 x5	A-Kent	Bijur	120	24x4	SS	...	2270	...
KISSEL 100-pt.	6-31x5	Remy	Own	117	34x4	SS	11743	1743	11743
LEXINGTON 6-0	12-21x5	Delco	Own	128	34x4 1/2	...	...	2550	...
LIBERTY 10-B	6-31x4 1/2	Delco	Delco	116	32x4	SS	1570	1570	1570
LOCOMOBILE E-38	6-41x5	Berling	Wetha	139	37x5	QD	15700	5500	5500
E-48	6-41x5 1/2	Berling	Wetha	142	37x5	QD	16700	6600	6600
LOZIER 84	4-41x5	Boech	G & D	120	36x4 1/2	SS	...	1695	...
82	6-31x5	Edman	G & D	132	36x4 1/2	SS	...	3250	...
MADISON	6-31x5	Remy	Remy	124	34x4	SS	11485	1485	1485
MAIBOHM B	6-31x4 1/2	A-Kent	Wagner	115	32x3 1/2	SS	1260	1260	1260
MARMON 34	6-31x5 1/2	Boech	Bijur	136	32x4 1/2	QD	13750	3700	3750
MAXWELL 25	4-31x4 1/2	A-Kent	Simms	109	30x3 1/2	C	1825	825	...
MCFARLAN	6-41x6	Magneto	Wetha	136	35x5	QD	4300	4300	4300
MERCER Series 4	4-31x4 1/2	Boech	U.S.L.	132	34x4 1/2	QD	14000	4000	...
MITCHELL D-40	6-31x5	Remy	Remy	120	32x4	SS	1465	1465	...
C-42	6-31x5	Remy	Remy	127	34x4	SS	...	1735	1735
MOLINE-KNIGHT C	4-31x5	Conn	A-Lite	118	34x4	SS	12000	2000	...
G	4-4 x6	Conn	A-Lite	122	35x4 1/2	SS	12500	...	2500
MONROE M-3	4-3 x4 1/2	Conn	A-Lite	96	31x3 1/2	QD	635	635	...
M-6	4-31x4 1/2	Conn	A-Lite	115	32x3 1/2	QD	...	995	...
MOON 6-36	6-21x4 1/2	Delco	Wagner	114	32x3 1/2	SS	1485	1485	...
6-66	6-21x5 1/2	Delco	Wetha	125	35x4 1/2	SS	12500	...	2500
MURRAY 682	8-31x5	Disie	Wetha	128	34x4 1/2	...	2800	2800	2800
NASH 681-683	6-31x5	Delco	Delco	127	34x4	SS	11490	1490	...
NATIONAL Six	6-31x5 1/2	Delco	Wetha	128	34x4 1/2	QDR	12450	12450	2450
OAKLAND Twelve	12-21x4 1/2	Delco	Bijur	128	34x4 1/2	QDR	13150	13050	3050
34-B	6-21x4 1/2	Remy	Remy	112	32x4	SS	1185	1185	...
OLDMOBILE 45-A	6-21x4 1/2	Delco	Delco	120	34x4	SS	...	1395	1395
27	6-21x4 1/2	Remy	Remy	112	32x4	SS	11395	1395	...

ABBREVIATIONS — "A, Kent" Atwater Kent, "A-Lite" Auto-Lite, "Conn" Connecticut, "G & D" Gray & Davis, "Edman" Edman, "L-N" Leeco-Neville, "N. E." North East, "Wetha" Westinghouse, "W. Lard" Ward Leonard, "SS" Straight side, "QD" Quick Detachable, "C" Clincher, "QDR" Quick Detachable Reversible.

NOTE: — 30-31r means that the rear tire is 30x3 and the front are smaller.



# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 3

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, OCTOBER 16, 1918

Twenty-five cents a copy  
Two dollars a year

## Let The Miller Plan Put New Blood In Your Tire Business

**Y**OU, Mr. Dealer, are facing right now a shortage of new cars just when the quietest season is on in the automobile trade and when the problem of meeting extra overhead is a serious one.

Miller offers a satisfactory solution for the problem. The Miller plan gives an opportunity to build up a new business through the growing demand for Miller Uniform Tires. Also to hold that business permanently because of the satisfied clientele the sale of Miller Tires makes.

### 99% Excellent

Of course you're interested in building up your business.

The Miller plan tells you how you can procure the Miller agency in your town—the exclusive agency for Miller Uniform Tires. The market is never crowded with a tire that has less than 1 per cent adjustment.

The public knows the value of uniform

tires and knows that the true uniform tires are the Miller brand, "**geared-to-the-road.**"

Write at once for the Miller Plan while the chance is open. And there are also the Miller Accessories and repair tubes to constitute a mighty good line now that every tire is required to give its greatest possible mileage.

"By Creating Uniform Builders We Created Uniform Tires"



**The Miller Rubber Co.**  
Dept. A55 Akron, O.

*Makers of Red and Gray  
Inner Tubes: The Team-  
mates of Uniform Tires.*



# UTILITY

## Automotive Products

### HEATER BUSINESS IS BOOMING WITH



**UTILITY Pump  
for All Cars  
\$12.00**  
For Fords \$7.50



### UTILITY HEATER for ALL Cars

With the first signs of cold weather, the great rush for Utility Heaters has started. Thousands of users are getting Utilities installed *now*, before real cold weather sets in.

Utility dealers everywhere are smashing last year's fall heater sales. Few car users these days will endure 8 months of cold motoring when a Utility Heater costs so little. Send for free descriptive pamphlet.

#### A Model for Every Car

Utility Protected Heater cars. Price \$20.00. Utility Front Seat Heater for roadsters, driving compartments of large cars and trucks. Also for rear installation on Maxwell and Chevrolet. Price \$12.50.

Utility, Jr., Protected Heater for Fords and other small cars. Price \$9.00.

Utility De Luxe Protected Heater for 8-cylinder cars. Regulated by foot adjuster. Price \$25.00.

Handled by good dealers everywhere. Dealers: Stock from your jobber. Get your share of heater business this next six months.

### HILL PUMP VALVE CO.

Mfrs. of UTILITY Products

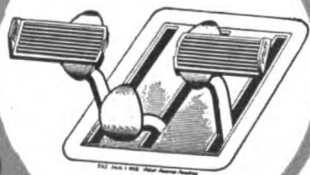
Archer Avenue and Canal Street, CHICAGO

Sales Department

THE ZINKE CO., 1323 South Michigan Ave., Chicago

#### UTILITY Disappearing Truck Body

for Fords—Price \$38.50

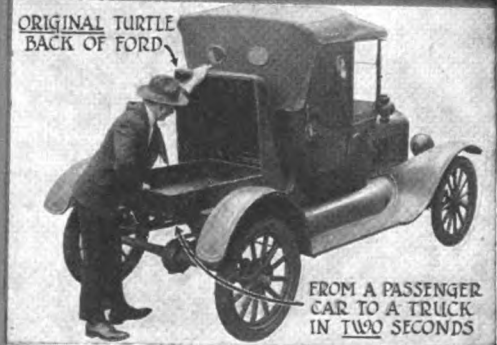


**UTILITY Pedals  
for Fords  
\$1.25**



**UTILITY Rim  
Wrench for  
All Cars  
\$1.75**

**UTILITY  
Universal Wrench  
Set for All Cars  
\$3.50**



ORIGINAL TURTLE  
BACK OF FORD

FROM A PASSENGER  
CAR TO A TRUCK  
IN TWO SECONDS



LOOK FOR THIS TRADE MARK



LOOK FOR THIS TRADE MARK

# CORK INSERT



## A big success

—because it has made good on  
hundreds of thousands of Fords

Why has Cork Insert made good in such a big way? What makes it work so smoothly? Simply this: The cork buttons provide *improved* friction. The powerful high-grade fabric carries the load.

**It isn't the cork — It isn't the fabric  
It's the COMBINATION**

in the patented Cork Insert way—that has made Cork Insert the big success that it is.

Cork alone hasn't the strength for transmission lining usage. Fabric alone lacks frictional qualities. It glazes down too quickly, causing grabbing, slipping, chattering.

But Cork Insert has the ideal combination of

**STRENGTH PLUS FRICTION.** When you apply the brake, the corks come into contact with the brake drum first. They compress gradually and ease the load down to the fabric. The light pressure required, and velvety smooth action of the buttons of cork coming in contact with the drums, mean such long wear that Cork Inserts are far the cheapest in the long run.

**Cork Insert is a big money maker —  
one on which you can get deliveries**

Cork Insert not only is a dependable money maker, not only is its use growing steadily, but it is a line on which you can get deliveries. It will pay you to push Cork Insert.



**\$3 per  
set of 3**  
Rockies West, \$3.25  
Canadian Price, \$4.50

**Advance Automobile Accessories Corp.**

Dept. K 13-1, 56 E. Randolph St.  
CHICAGO, ILL.



**\$1**  
for 1917-18 Fords  
85c for 1916 and earlier Fords  
Canadian Prices: 1917-18 model, \$1.50—earlier model \$1.25



TO PREVENT a coal famine 720,-000,000 tons must be mined and delivered to consumers before winter—60,000,000 tons a month.

*"There is now a Fisk Tire  
for every motor vehicle that rolls"*

**M**OTOR TRUCKS can do their part to prevent a coal famine by making quick deliveries from the yards to householders.

TRUCKS cannot afford to lose time. Every minute and every mile counts.

GOOD TIRES prevent delays—

DEPENDABLE TIRES are built to wear, and meet the rugged conditions encountered in actual use.

FISK SOLID TIRES are dependable. When you need truck tires—buy FISK.

# FISK SOLID TIRES

*To Tire Dealers: Write at once to The Fisk Rubber Company of N. Y., Chicopee Falls, Mass., Dept. J, and get full information about Fisk Solids and the liberal Fisk Dealer proposition*

When writing advertisers please mention Motor World—it identifies you



# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

## The Class Journal Co.

U. F. C. Building, 231-241 West 59th Street, New York City  
 Horace M. Swetland, President  
 W. L. Ralph, Vice-President  
 A. B. Swetland, General Manager

Business Department  
 Charles B. Shanks, Manager

Editorial Department  
 David Beecroft, Directing Editor  
 Ray W. Sherman, Editor  
 Stanley E. McMinn, Managing Editor  
 J. Howard Pile

### Branch Offices

Chicago—Mallory Bldg., 59 East Madison St., Phone Randolph 6960  
 Detroit—85 Fort Street, West, Phone Main 1851  
 Cleveland—Guardian Bldg., Phone Main 1143

Subscription, Per Annum (Postage Paid).....\$2.00  
 Foreign and Canadian Subscriptions.....4.00  
 Single Copies (Postage Paid).....10 Cents

### Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to MOTOR WORLD.

Cable Address, "MOTORWORLD," New York

Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

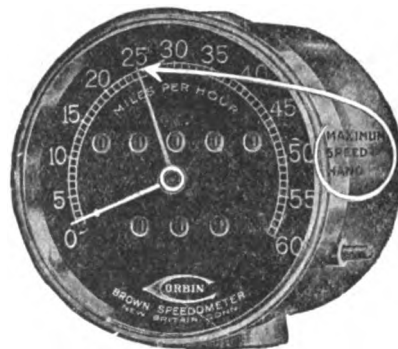
Owned by United Publishers Corporation, 243 West 59th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. C. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
 Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

What You Will See In This Issue .....	7
You Must Fight .....	8
How to Get By This Winter .....	10
Cut Out the Waste .....	12
How to Sell Used Cars .....	16
How to Make Service Pay .....	18
How to Sell Tractors This Winter .....	19
How to Sell Motor Trucks .....	23
The Passing of the Unfit .....	27
How to Advertise Automotive Products .....	32
How to Sell Farm Light Systems .....	35
If You Do It This Way— .....	39
The Industrial Truck—An Opportunity .....	43
How to Make the Shop Pay .....	44
How to Get Prospects .....	45
Dealers Must Teach Farm Mechanics .....	46
How to Make Mechanics .....	47
What the Jobber Can Do .....	48
After the War—What? .....	52
Winter Business Automotive Equipment .....	55
Regular News Section .....	87-93
Specifications—	
Motor Trucks .....	94
Passenger Cars .....	96

Advertisers' Index on Next to Last Page



## Reasons for CORBIN-BROWN SPEEDOMETER Supremacy

### 2. Accuracy.

Corbin-Brown accuracy does not depend wholly upon the simple and correct operating principle of the instrument itself. It really begins with the sturdy drive gears. Gears and shaft are made in one piece to insure absolutely perfect transmission of the driving power to the cable—and also for greater strength and wearing ability.

The exclusive link cable in turn maintains the high ideal of Corbin-Brown accuracy by eliminating lost motion, and by reducing friction in the casing to the minimum. Much speedometer trouble in the past was caused by binding of the flexible shaft. The link cable, having only very small points of contact with the casing, permits of utmost sureness and durability.

The accuracy of the instrument itself is insured by the application of the centrifugal operating principle, which is not in the least affected by extreme temperatures or electrical influence. It works equally well under all possible road conditions. Has few parts. Ample strong for long life. Not deranged by severest jolts.

In considering the Corbin-Brown you will of course be most deeply impressed by its accuracy, but it will pay you at the same time to investigate the other advantages—especially the Maximum Speed Hand.

Write Today for Catalog

## Corbin Screw Corporation

American Hardware Corporation, Successor

NEW BRITAIN, CONN.

BRANCHES: New York Chicago Philadelphia





## Turn Present Business Conditions to Your PROFIT

**Grasp the electric plant business—today!**

¶ You can start at once. You have the organization, the facilities, the training, the acquaintance and the ability. We have the right product and the right proposition.

¶ Act at once—sell an essential product.



**A Complete Line of Real Quality Plants**  
Conservatively Rated

### Advantages—

**PRESTIGE**—Over five years' continued success recommends these units.

**QUALITY**—High-grade, complete and fully equipt.

**DEMONSTRATION**—Exclusive—fully automatic—none other.

**COMPLETE LINE**—Five sizes \$340 and up—15 lights to 15 KW.

**STANDARD DESIGN**—Four-cycle, water cooled engines. General Electric Generator, Willard Batteries, etc.

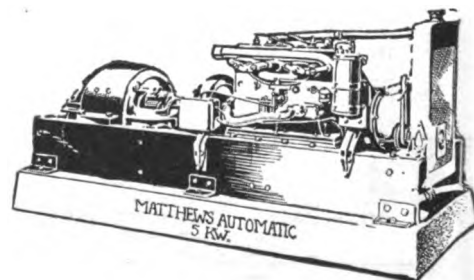
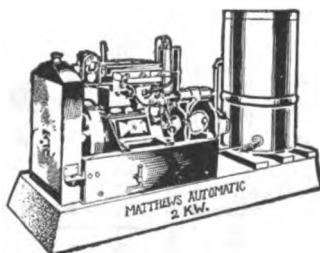
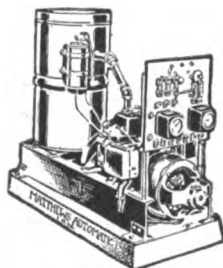
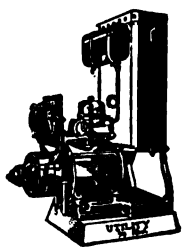
**CO-OPERATION**—Complete in every detail and proven effective.

**QUANTITY PRODUCTION**—Volume production keeps our prices low without lowering quality.

**This business is logically yours—and it is PROFITABLE**

*Write for Booklet, "Co-operation"*

**Consolidated Utilities Corporation**  
730 South Michigan Avenue Chicago



# After the War—What?

At least four big European manufacturers of cars are planning an invasion of the American market just as soon as hostilities cease.

Their offerings will be low, medium and high price products. Models have been made and tested, and manufacturing plans have been carried to a state of completion.

These foreign manufacturers count much on the advantages of labor costs which they will enjoy. They know that the question of ocean transport will not be bothersome. They realize that the import duties will not be a barrier of consequence.

And these foreign manufacturers know that in America there is an enormous potential market. They know that in America there is distributive machinery that has proved conspicuously efficient.

*How much difficulty will the European manufacturer have in securely establishing himself in the American market?*

That question can best be answered by the American manufacturer, and it will be answered by him.

If the manufacturer on this side will have product that is as good as that which will be imported, and if he will do all that should be done toward maintaining his present dealer organization, and campaign to strengthen and broaden his dealer organization, the European manufacturer will have a relatively harder time coming here and establishing satisfactory distribution. But if—

*(Continued on page 108)*



## CONSERVATION MEASURE

THE WELL-INFORMED BUYER APPRECIATES CIRCUMSTANCES SURROUNDING THE BEARING INDUSTRY AT THIS TIME AND EXCHANGES WORN BEARINGS FOR A NEW AHLBERG REMADE BEARING SAVING CONSIDERABLE TIME—MONEY AND STEEL.

### AHLBERG BEARING COMPANY

2636 Michigan Avenue

CHICAGO

*Branches:*

New York  
Detroit  
Minneapolis  
San Francisco  
Cleveland

Philadelphia  
Los Angeles  
Portland, Ore.  
St. Louis  
Atlanta

Boston

**SPECIALS**

When writing advertisers please mention Motor World—it identifies you

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, October 16, 1918

No. 3

## What You Are Going to See in This Issue of Motor World

### *And Why It Is Published*

**I**N winters gone by the problem of the trade has been to keep cold weather from pressing down the business curve.

This winter there is a double problem—winter and war.

The conditions are most unusual, and they have been thoroughly investigated by Motor World in preparing this Third Annual Winter Business Number.

The result of the investigation has disclosed that the trade CAN get by—if it operates along certain well defined lines.

What these lines are is disclosed in the pages that follow.

Every dealer, garageman, repairman, accessory man, jobber and salesman should study them.

*Study of this issue may mean your successful future.*

Why?

Because some day the war will end, and if you're still in business when that time comes you will have a running start to a successful future. The man who is forced out now—or who quits without necessity—who takes down the sign over the door—will have to start all over again—and the starting will be hard.

To-day every man has two jobs:

1—Finish this darned war and get back to business.

2—Keep his business here so he will have something to get back to.

And in this issue you'll find the how-to-do-it.

# You Must Fight Over Here *and* Over There

*Your business at (Fill in your address) No.....,  
.....Street, .....City, .....State,  
is one of the roots of the tree on which we're going to  
hang the Kaiser, the Crown Prince and all the rest of the  
PotsDAM gang.*

**T**HERE are three parts to the tree on which we're going to hang the Kaiser and the rest of his tribe.

The branches to which the rope will be hitched represent justice and liberty for the peoples of the whole world.

The trunk is the army.

*The roots are the business and industry of the country.*

And if the roots wither there won't be any place to hang the Kaiser—which will be most regrettable.

There are two kinds of business: 1—War, and 2—Non-war.

1—War business furnishes the machinery with which the Kaiser will be made to see the folly of his ways.

2—*Non-war business furnishes the backing for war business. Non-war business must be kept going as far as possible.*

It is hard for non-war business to keep going—for two reasons:

1—There are many material difficulties. It is hard to get labor and materials.

2—*Many spirits are easily broken.*

It is hard for some folks to keep up their morale. They give up easily. They quit. They are NOT fighters. An army without morale can't fight. A business man without morale can't be successful.

**Success in war, in business or in life is mostly a question of spirit.**

**In the army they call it morale.**



**You must fight the home fight over here the way the boys are fighting the Hun fight over there.**

*That it is easy for some folks to cry quits is illustrated by one of the biggest newspapers in America, which laid down and declared that President Wilson should consider the Austrian "peace offer."*

What was the result? President Wilson said he had no time to waste in argument, and in a few days Bulgaria quit the war. The rats are deserting the Kaiser's ship. Wilson's morale and fighting spirit won a big victory.

*That's what fighting spirit can do.*

Business men—dealers, garagemen, repairmen, jobbers, salesmen, and all the rest—must keep up their fighting spirit.

They must get behind the war with full support.

In addition, they must keep business going as well as they can.

Each business man who keeps going furnishes a *fighting example* for the man whose spirit may be ebbing. By "carrying on" yourself you may be the means of keeping many weak-spirited men going.

You must first adjust yourself to meet the demands of war on your business.

*Thereafter you must figure HOW TO KEEP GOING.*

**YOU MUST NOT QUIT.**

You must stay here NOW so you can support the war.

You must be here WHEN THE WAR IS OVER so the readjustment of America will be effected to the best advantage of America and YOURSELF.

This means that you must plan how to keep your overhead DOWN and your income UP.

You must be active.

You must advertise.

You must sell and give service.

*You must fight the home fight over here the way the boys are fighting the Hun fight over there.*

Take stock of yourself.

Have you been tempted to quit?

Has the job seemed more than you could do?

The job isn't as hard as you thought. The thing that made it seem hard is the thoughts you thought.

**The war will be won and business preserved, both now and after the war, by men who think they can do things.**

*What do YOU think?*

# How *YOU* Can Get By During This Winter of War

## Ten Years From Now Look Back and Read This Message

**T**HERE is to-day coming up in the business world and in this trade a generation of new men. They are going to work along new business lines, with methods that will leave lean pickings for the business of the old school. These men are all about us to-day. You can count them one by one—if you will only be observant as you look around you. Some of them have been in business for a long time—but always in the lead. They are not all young in years. Some of these “new” men will be old in years, but after the war they will come sweeping over this trade like a silent, all-enveloping cloud, and one by one the old-school businesses will be chalked off the slate. Folks will give various reasons for the failures, but the fact will be that the world went on and left them.

With a world war making many radical things necessities, the time to shake off every hampering prejudice and old-school handicap is now. Next spring you may not be here to do it if you don't do it this October.

### The First Step

**I**N proving your fitness to survive and be a factor in business after the war you must first determine that you are going to outlast the war.

Too many men in the automotive trade have succeeded WITH conditions. They have not succeeded IN SPITE OF conditions.

It is these in-spite-of-conditions men that we want to-day. They are the fighting men of industry who will save American business from wreckage in the turmoil of civilization's great upheaval.

**BE ONE OF THOSE MEN.**

*All that you need is the will.*

### The Second Step

**A**FTER you have determined that you WILL outlast the war you must get plans for doing so.

You must economize. You must trim the sails of your business, but not lessen your productive effort. You must cast overboard all extravagances, all waste, all surplus weight.

You must find what part of your business helps it make a profit and cast from you those parts that do not make a

### One Thing You Must Do—

**A**ND that is think new thoughts. As a business man, you are meeting new conditions, new methods in all lines, new obstacles, and while many of the conditions of to-day will pass away at the end of the war we shall never again have business as we have known it in the days gone by. We shall have good business and good times, but they will be good to that man and that man only who thinks the new thoughts, employs new methods, adopts new plans and becomes part of the new army of business.

profit. On pages that follow are many suggestions as to how to economize yet not lessen the speed of the business machine.

You must seek out new means of income if your present income is decreased. In tables, citing classes of businesses, on these pages are suggestions as to how to increase income, and on other pages of this issue are other suggestions.

You must know your costs and profits. You cannot succeed, you cannot go on, you cannot know where you are

going, unless you apply the acid test of accounting to your business and KNOW WHAT YOU'RE DOING.

You may think you know, but you may not know until too late that what you know isn't so. Be SURE.

*Get on a cash basis.*

*Make your service pay.*

*Go into used cars scientifically.*

*And then work toward an automotive basis.* Get agencies for trucks and tractors. Develop lines of income to supplement the car sales income that you used to have in such volume.

Expand your business in an automotive direction and get several legs under it so you won't be trying to stand on one crippled leg as some dealers are to-day.

If you are a garageman your problem is to economize in every direction and to increase every possible department of your business. Cars in service have always been your income, and they are still in service. So you must endeavor to cut costs and increase income. *But with it must, go keen accounting.*

### The Third Step

**I**N the second step we have mentioned plans, all of which are presented on other pages of this issue. The third step is to put the plans into operation—to act.

Where would we be in the war to-day if Washington drew up a fine set of plans and then didn't use them.

Where would any of our big companies be if they had merely made plans—and not used them?

Planning is a detail.

**Success lies in ACTION.**

# Things You Should Do to Get By

## *And the Places in This Issue Where You Will Find Ideas on Those Points*

How You Can Sell Used Cars.....	16	Cut Your Mailing Expense.....	42
Make the Old Cars into New Ones..	17	Make Your Shop Pay a Profit.....	44
Make Your Service Pay.....	18	You Must Originate Prospects.....	45
Cut Out Your Business Waste.....	12-15	Teach the Farmer Care of Machinery	46
Push the Sale of Trucks.....	23-32	The Passing of the Unfit.....	27
Sell Tractors This Winter.....	19-22	You Must Train Employees.....	47
Sell Farm Lighting Plants.....	35-41	How Jobbers and Manufacturers	
Make Money from Accessories.....	55-85	Can Help .....	48-50
Investigate the Industrial Truck....	43	After the War—What?.....	52-54

## Which Class Are You In?

*THE thing for every dealer to do NOW is to become as automotive as possible, but if he hasn't been thinking the new thoughts it will take him some time to get started. Therefore, his problem is how to get by until he can get on an automotive basis. Maybe he can get by without becoming an automotive dealer, but every dealer should try to get into the automotive class. Meantime, let us look at these different classes:*

### Class 1

I—Selling cars only.

#### What Class 1 Must Do

- a—Economize.
- b—Rent part of his space, if he can.
- c—Buy and sell used cars.

### Class 2

- I—Selling cars.
- II—Operating a service station.

#### What Class 2 Must Do

- a—Economize.
- b—Rent part of his space.
- c—Buy and sell used cars.
- d—Make his service pay.

### Class 3

- I—Selling cars.
- II—Operating a service station.
- III—Selling accessories.

#### What Class 3 Must Do

- a—Economize.
- b—Rent part of his space.
- c—Buy and sell used cars.
- d—Make his service pay.
- e—Increase his accessory business.

### Class 4

- I—Selling cars.
- II—Operating a service station.
- III—Selling accessories.
- IV—Selling a truck.

#### What Class 4 Must Do

- a—Economize.
- b—Rent what space he doesn't need.
- c—Buy and sell used cars.
- d—Make his service pay.
- e—Increase his accessory business.
- f—Increase his truck business.

### Class 5

- I—Selling cars.
- II—Operating a service station.
- III—Selling accessories.
- IV—Selling a truck.
- V—Selling a tractor.

#### What Class 5 Must Do

- a—Economize.
- b—Rent what space he doesn't need.
- c—Buy and sell used cars.
- d—Make his service pay.
- e—Increase his accessory business.
- f—Increase his truck business.
- g—Increase his tractor business.

### Class 6

- I—Selling cars.
- II—Operating a service station.
- III—Selling accessories.
- IV—Selling a truck.
- V—Selling a tractor.
- VI—Selling a unit light and power plant.

#### What Class 6 Must Do

- a—Economize.
- b—Rent what space he doesn't need.
- c—Buy and sell used cars.
- d—Make his service pay.
- e—Increase his accessory business.
- f—Increase his truck business.
- g—Increase his tractor business.
- h—Increase his electric plant business, and sell electric accessories.

### Class 7

- I—Operating a garage.

#### What Class 7 Must Do

- a—Economize.
- b—Utilize waste space and rent any that is not needed.
- c—Increase the sale of accessories.
- d—Make the shop an income producer.
- e—Figure costs and profits accurately, and make every department pay or else turn it over to some other use that will pay.

*IDEAS, plans and methods for doing all the things enumerated in these 7 classes will be found on other pages of this issue of Motor World. The whole issue is built around this plan of telling dealers and garage-men how they may get by this winter, even though the dealer may be one whose income is from cars—and that fast disappearing*

# Cut Out the Waste Economize in Your Business

*100 Ways in Which Other Business Men  
Have Reduced the Expenses of Their Business*

## HOW MANY OF THESE IDEAS CAN YOU USE?

### 1—USES CLIPS MANY TIMES

The Electric Vehicle Garage, Denver, saves paper clips and uses them over and over again.

### 2—RETRENCHING FOR FAIR

E. E. David, Kansas City, is gradually eliminating the repairshop feature of his business. He has employed no mechanic since the last left; he is an expert mechanic himself. He is going to sell his storage garage and accessory store, or turn it over to somebody who can run it and serve the customers, while he takes a job in a repairshop with volume of business to keep all equipment and help fully employed all the time.

### 3—SALESMEN SELL ANYTHING

Several of my salesmen having been called to the colors I adopted a method of increasing the efficiency of my remaining force rather than breaking in new men. Instead of a separate sales organization for each car and truck every one of my salesmen is now instructed to sell any vehicle. This method is working out satisfactorily because the first step is to discover how much the prospect can afford to spend and he then confines his effort to selling the car best suited to his means. The new system has resulted in several unexpected sales of both passenger cars and trucks, as it has happened that a prospect unsuccessfully approached on passenger cars became a truck purchaser and vice versa.—J. C. Phelan, Fresno, Cal.

### 4—PLAN USE OF COMPANY CARS

One demonstrating car used intelligently does the work of six, due to systematic planning. And sending the service truck on a regular schedule of calls so we can reach the driver by phone at any time on his route to give further directions

saves his reporting to the office and going off again. Result, saving of fuel, oil and tires.—R. B. Nettleton, Chandler Motor of New England.

### 5—SPECIALISTS AVOID DISPUTES

The Cadillac Motor Co. of Denver has all testing done by two special testers instead of mechanics, and thus saves time and danger of disputes.

### 6—LESS FREE SERVICE

E. E. David, Kansas City, garage and repairshop, formerly had two boys working; they went to the navy, and he has not replaced them—elimination of free service making replacement unnecessary.

### 7—SAVES BROKEN PARTS

All broken parts in our machine shop are saved, and made into smaller parts for which they are suitable.

### 8—CONSOLIDATED OFFICES

Consolidating offices, rearranging for convenience to save time and supplies. Systematizing in various departments in a way never gone into before. We are spending more money for printing than ever.—Russell P. Tober, Inc., Hartford, Conn.

### 9—SHOP LABOR PASSES

The Swenson Auto Co., Denver, has its workmen punch their time cards when they actually begin work and stop work. This saves paying for a great deal of time in some cases spent changing clothes, and also improves promptness of men.

### 10—HOW McKONE SAVED

All personal calls have been ruled out. And we apply the rule to ourselves as a good example for employees.

Helpers have been dropped in all departments.

Night letters take the place of a dozen telegrams, making a large telegraph saving.

Our operating force has been reduced one-half, but we have fortunately retained the efficient ones.—J. L. McKone, Connell & McKone, Boston, Overland, Atterbury and Bethlehem.

### 11—QUIT ACKNOWLEDGING ORDERS

Doing away with acknowledging parts orders except in special cases is saving the Cadillac Motor Co. of Denver much time and postage.

### 12—EIGHT MONEY SAVERS

Systematizing repair station work. Keeping closely in touch with all details. Keep everlastingly after slow pay customers, reduction of free service and getting cash for parts, repairs, gasoline and oil. Straightening out difficulties as fast as they arise and not letting them get cold. Keeping an eye on the coal pile and the man who runs the boiler. Casting an occasional glance at the car washer and correcting his mistakes.—Hartford Buick Co., Buick, G.M.C., White, International, Hartford, Conn.

### 13—SMALLER SIZES OF PRINTING

The high cost of printing, which includes the high cost of paper, has induced numerous dealers and garagemen of Milwaukee to reduce the size or dimensions of invoices, statements and other forms wherever it was practicable. In ordering new supplies. The printers were glad to give the benefit of their technical knowledge and in some instances the new jobs cost no more than the former order, in spite of the fact that paper, labor and other costs had risen sharply in the interim. At the same time

an appreciable conservation was effected in numerous ways.

#### 14—NO GASOLINE FOR CLEANING

The Cadillac Motor Co. of Denver has done away with using gasoline for cleaning.

#### 15—CHARGES FOR FORMER GIFTS

E. E. David, Kansas City garageman, used to give much free service to storage customers: 1—call for and deliver cars; 2—adjustments on carbureter, etc.; 3—wiping up cars; 4—testing out tires; 5—changing tires. He now charges for each of these items—for instance, 25 cents for changing tires.

#### 16—NEW SHIFT SAVES TIME

The Electric Vehicle Garage has two men doing work formerly done by three. This is done by a splitshift arrangement to cover the rush hours of morning and evening.

#### 17—PAY BILLS PROMPTLY

We have found it cheaper to pay bills as they come in and take the cash discounts.—Elmer Automobile Co., Hartford, Conn.

#### 18—PHONE CALLS 5 CENTS

"Drop a nickel in the slot and call the operator as usual," is the notice on the telephone in the Chandler salesrooms, Boston, where visitors, customers, etc., have been in the habit of using the telephone freely. Now they pay for their call and the company saves quite a number of calls. No toll calls go through the switchboard except from the offices of the executives, so the latter know who is to talk and why. And a 50 per cent. saving has been effected.—R. B. Nettleton, Chandler Motors of New England, Boston.

#### 19—AIR TUBES ELIMINATE BOYS

The Cadillac Motor Co. of Denver saves work of two boys by using pneumatic tubes between office and shop.

#### 20—ELIMINATED RASH PROMISES

Inculcating in salesmen the fact that it is poor business to make rash promises. To sell the car as it comes and not as it can be made.—Elmer Automobile Co., Hartford, Conn.

#### 21—BIG CUT IN LIGHT BILL

E. E. David, Kansas City, garage and repairshop, had eight 400-watt gas-filled lights, two outside, the rest inside the garage and office. He sold some, stored others; replaced with 60-watt lamps—none outside, and only one lighted inside except when actually needed. Reduced light bill from \$16 a month to \$2.50. And avoided replacement cost on big lamps of \$6 each.

#### 22—A WAY TO SAVE GAS

Limiting the gasoline to 1½ gallons in demonstrating cars has kept the mileage

down and made the drivers shorten their trips. This has saved tire wear, too. And no gasoline is put in any car until it is to go out, so there is no excuse for salesmen to jump in a car to run around the block. And in cars sold just enough fuel is put in to enable the buyer to reach his home.—George Crittenden, Chandler Motors of New England, Boston.

#### 23—DID AWAY WITH SHOP JOB TICKET

One Kansas City garage superintendent has abolished the job ticket that goes to the shop. He instructs the mechanic successively as to each operation to be performed on a car—the superintendent marking the time consumed. Idling is thus quickly detected.

#### 24—PIPES NOW CARRY OIL

A pipe connection between shop and waste oil tank saves much handling of oil in cans by the Cadillac Motor Co. of Denver.

#### 25—PERSONAL OBSERVATION HELPS

Economies have been effected here by personal observation. Take a day off occasionally to drop in unexpectedly at branch stores and see how stock is situated. Inventory frequently. This plan has corrected some bad faults and has effected a saving. All branch managers must give a detailed weekly report of business, together with statement of parts and cars sales.—Elmer Automobile Co., Hartford, Conn.

#### 26—COMBINED TWO AGENCIES

By amalgamating the Maxwell and Chalmers and using one building we reduced the rent of both agencies at least 50 per cent. This also solved the help problem, for we were able to retain enough from both forces to make one very strong organization. And telephone, telegraph and other bills came down in proportion.—C. E. Fay, Fay-Al-len Co., Maxwell and Chalmers, Boston.

#### 27—EMPLOYS NIGHT SALESMAN

H. L. Brown, Kansas City, garageman, employs an elderly man, not a mechanic, at \$50 a month, to keep shop at night. This man sells accessories, but does not install them.

#### 28—CASH THE BIGGEST ECONOMY

Tom Botterill, Denver, declares the biggest economy he has established is the cash basis plan, which is satisfactory to his more than 1,000 service and repair customers.

#### 29—SALESMEN DO MORE WORK

The war has taken three salesmen. Their places have not been filled. Work has been divided among the remaining three salesmen and good results have come of the arrangement.—Colonial Automobile Co., Studebaker, Hartford, Conn.

#### 30—"GARAGE SALESMAN" PAYS

In one Kansas City garage the man in charge is always clean, meets customers in the front door, does no work in the shop, but watches the time on jobs sent to the shop. He seems to have much idle time, but no customer gets away unserved.

#### 31—WATCH FLOOR SWEEPINGS

In our service station one day I noticed the porter, in sweeping up the floor, dumped the stuff in and it made a thud in the barrel. I bought a sieve. Now the sweepings are sifted and we get paid for the junk instead of enriching the garbage man. And we also find nuts, bolts and washers that should not be thrown away.—W. J. Walker, Concord trucks, Boston.

#### 32—RELEASED TWO NIGHT MEN

By shutting down the service station at 6 p. m. money has been saved. Two night men have been released. Free service has been cut away down. Cash for repairs and parts has meant a saving.—The Britton Co., Stearns-Knight, Federal, Moline tractor, Hartford, Conn.

#### 33—ALL LETTERS IN ONE ENVELOPE

Our mailing department files letters alphabetically, and when different letters and invoices to our customers are sent out in the mail all papers for any one customer go in one envelope. This saves us a great many extra envelopes and postage, because we frequently have as many as six letters and invoices going to one customer in one day.—F. K. Levy, Interstate Electric Co., New Orleans.

#### 34—GOT CHEAPER RENT

We were among the first Boston dealers to follow the advice from Washington about consolidation of salesrooms, moving from a big place on Commonwealth avenue to take half the space of the J. W. Bowman Co., the Daniels man. We have plenty of room and our rent bill no longer staggers us.—F. A. Hinchcliffe, Jordan, Boston.

#### 35—CLUB OF DRIVERS AUTO SERVICE

A clubroom in the service station induces chauffeurs to gather for a game of pool in the evening and they can be led to look over their machines and discuss them. This makes for less repair work.—L. H. Amrine, Scudder Motor Truck Co., St. Louis.

#### 36—CO-OPERATION CUTS COSTS

Close co-operation of all salesmen and the setting aside of personal issues for those of the concern has increased efficiency. Salesmen vitally interested in the welfare of the proprietor consider that his money is involved and treat him fairly. One of the best local examples



of team work. If one man cannot close a sale he admits it frankly.—S. A. Miner, Pierce Arrow, Hartford, Conn.

### 37—STOPPED WHOLESALE TRAVELING

W. W. Barnett, Denver, has stopped trips of wholesale salesmen and brings dealers in to sign contracts. This plan also gives dealers some of the enthusiasm seen everywhere in the Barnett organization.

### 38—50 CENTS FOR MOUNTING TIRE

H. L. Brown, garageman, Kansas City, charges tire customers 50 cents extra for mounting the tire sold.

### 39—USELESS TELEPHONE CALLS

Checking up telephone calls I found a number were personal ones. Some were overtime. So I have adopted a rule that all personal calls must be paid for at the prevailing zone rate, and deducted each week from the salaries of employees using the phones. And I have set a limit of three minutes on all calls, unless urgent business deals. There are less calls outgoing now and less time wasted in gossiping.—A. H. Sowers, Fulton truck, Boston.

### 40—DOOR DEVICE SAVED LABOR

The door tender at the Federal Truck Co. in St. Louis could not be dispensed with last winter, but he seemed to have much unemployed time. So President Baker had the door fitted with ropes and pullies and ran these ropes to where it was warm enough for a man to do desk work. The door tender sat there comfortably, did the work of another man and pulled the rope when a truck driver tooted his horn. The service was satisfactory.

### 41—SPEAKING TUBE SAVES TIME

A service station has installed a speaking tube between the office and the foreman's desk, eliminating many steps and much shouting and bringing about more frequent interchange between office and shop.

### 42—COMBINE TWO DEPARTMENTS

Used car and new car departments merged under one head, eliminating one sizable salary and making it easier to handle trade-ins.—Willys-Overland, Inc., Hartford, Conn., branch.

### 43—TIME LOSSES ERASED

The Cadillac Motor Co. of Denver saves money and avoids disputes by having a regular timekeeper handle time of all workmen and keep record of time on individual jobs.

### 44—BOUGHT A PAPER BALER

When I read in the papers recently that the city proposed to boost the price from 7 to 11 cents a barrel for taking away our refuse I went down town and

bought a paper baler and beat them to it. This machine will pay for itself quickly and the city cartage bill will be less than at the old rate of 7 cents a barrel.—Frank P. Allen, Fay-Allen Co., Maxwell-Chalmers, Boston.

### 45—GROUPS TELEGRAMS

Tom Botterill holds necessary telegrams to factory until night wherever possible and groups orders in night letter.

### 46—CUT TIRE SERVICE 66%

The Bittell-Leftwich Tire Co., Kansas City, has cut down its free service by half—and is running only four wagons against 12 formerly maintained; customers must frequently wait for service, but the four wagons are busy all the time.

### 47—ELIMINATED LEG WORK

Tom Botterill, Denver, has moved his general repair shop from the second floor to the ground floor and hired messenger boys to save time of mechanics when parts are wanted.

### 48—"LUMPED" TELEPHONE CALLS

The Alfred Reeke Co., Milwaukee, representing the Nash, reduced its long distance telephone bill nearly 100 per cent by fixing a certain time of day for transmission of calls to the factory at Kenosha, which is about 35 miles from Milwaukee. Excepting in special emergencies, all telephone calls were "lumped" at a certain hour instead of being spread over the period of the day.

### 49—OPENED LABOR SCHOOL

We met the shortage of help by employing women and by opening an educational department in our service station for boys who sign an agreement as to what wages they are to receive during their period of learning how to repair cars. It is working wonderfully well.—A. L. Danforth, Cadillac, Boston.

### 50—WATCH YOUR ELEVATORS

The Mitchell Automobile Co., 528-532 Broadway, Milwaukee, effected a large saving by watching for abuses of its hydraulic freight elevator, with the consequent waste of water and wear and tear on machinery. The Mitchell shop is on the third floor and repairmen formerly "took the elevator" every time they went down to the stock room or service division on the main floor. Now they take the stairs and the elevator is used only to haul real loads.

### 51—HERE'S A SOAPY ONE

Manager I. B. Allen, Central Garage, Denver, saves nearly half his former soap expense by measuring out soap to make suds for washing cars instead of letting workmen mix it up any old way.

### 52—SAVES PORTER'S WAGES

Robert J. Flynn, general manager as well as vice-president, feels sweeping the floor, dusting and polishing the cars is not above him. Demonstrates himself and on occasion writes his own letters. Saves a porter's wages of at least \$25 a week.—Hartford Scripps-Booth Co., Hartford, Conn.

THE LAMAR MOTOR SALES COMPANY  
RIGHT ON MAIN ST.

**"The House of Quality Cars"**

ALSO ALL THE TIRES AND ACCESSORIES  
To Make Motoring a Pleasure

COME TO SEE US  
ALWAYS GLAD TO SEE YOU

DO YOU NEED A  
**New Tire**  
ALL SIZES FOR ALL CARS

**6 DIFFERENT BRANDS 6**

Every Tire Guaranteed

GOODYEAR UNITED STATES BLACKSTONE  
GOODRICH MICHELIN REPUBLIC

The Lamar Motor Sales Company  
RIGHT ON MAIN ST.

**Dike Says:**

WHEN YOU NEED ANYTHING  
**For Your Automobile**

Call at Our Motor Shop  
IT'S THE HOME OF MOTOR NEEDS

THE  
**LAMAR MOTOR SALES CO.**  
RIGHT ON MAIN STREET

**DIKE SAYS:**

**Our Pumps Are Dandy**

Save Time, Labor and Cumin'  
Our Goggles are Built for Motorists.

OUR TIRES—EVERY ONE GUARANTEED  
All Sizes for All Cars.

PAY OUR STORE A VISIT  
It's The Motorist Home  
Everything for Those Who Motor.

**THE LAMAR MOTOR SALES COMPANY**  
RIGHT ON MAIN ST.

Well, they are talking about "repairshop short-cuts. Why not Advertising Short-Cuts when now is the time of all times to advertise?

Well, here is one of the advertising short-cuts that C. H. Wooden of the Lamar Motor Sales Co. at Lamar, Col., has been using.

You see here reproduced four different and distinct circulars, yet they cost the company just what one would cost.

Wooden, the advertising manager, arranges his copy for a 10 x 4 circular and orders 500. They are so printed that by cutting them it makes 2000 neat and attractive circulars and the cost is one-fourth.

Every day every motorist finds a new circular from the "House of Quality Cars" in his car. All the out-going mail from the office carries one of the circulars and the firm finds that it is doing four times the amount of advertising for one-fourth the cost.

**53—"CASH" TO THE UNRATED**

A tire company has adopted the plan of selling for cash only to customers without credit rating—another way of selling for cash only to passenger car customers.

**54—SALVAGES OLD ENVELOPES**

All incoming envelopes are placed aside in our office now. When the stenographers or others have notes to send to persons in the office they use these old envelopes instead of new ones. It is a small item weekly, but yearly it will be worth something in the cost of new envelopes, and the saving of white paper.—C. S. Henshaw, Dodge Brothers, Boston.

**55—EIGHT WAYS TO CUT EXPENSES**

These are some of the economies one St. Louis firm put into force before the owners sold recently:

Rented the front space for a display room, both firms using the telephones; persuaded the bookkeeper to do work of both firms for one-third more, same hours;

Added to storing space and lessened mechanics' space, as mechanics were not obtainable;

Put in a half-soleing machine to pick up waste time of emergency men.

Required night watchman to sort all waste.

Replaced men car washers with women.

Cut out ceiling lights and placed more small lights for single workmen, requiring them to turn them out.

Shortened credit.

Cut off night work.

**56—CUT OUT ONE TELEPHONE**

Service department cut out one telephone, as they found they could do without it.—A. C. Hine Co., Hartford, Conn.

**57—THEN HE MADE MONEY**

A tire company manager, after a day of poor tire business, checked up the 54 service calls of that day; only four were from his tire customers. The next day the charge of 50 cents for calls within 26 blocks, \$1 outside, was installed.

**58—MAILS MORE, PHONES LESS**

Uncle Sam's mailman now takes the place of the numerous telephone calls on prospects. You pay for each phone call, even though the prospect is out, while the letter finds him or her in some time. Also our salesmen make personal calls on those living in their neighborhood; these being on the way to or from work. Balance, one two-cent stamp against two and three telephone calls at 5 or 10 cents each, and it makes a big average yearly.—A. L. Danforth, Cadillac, Boston.

**59—WASHES CLEANING RAGS**

The Cadillac Motor Co. of Denver has cleaning rags washed several times for 4 cents a pound instead of buying new ones for each using at 11 cents a pound.

**60—CHECK THE NON-CUSTOMERS**

A tire company checks each telephone or other call for service back to its card index of tire customers; the caller waits, and if the name is that of a non-customer he is notified that a charge will be made for service.

**61—CASHING IN ON USED CARS**

The East Side Buick Co., 486-490 Milwaukee street, Milwaukee, a large retailer of Buick cars and trucks, is cashing in on the splendid reputation established during the last year or two in merchandising used cars taken as part payment on new cars. During the time that the production of new cars is at low ebb the company is featuring its used car department, which handles any and all makes on a flat commission of 10 per cent. of the selling price. Used cars are displayed on the main sales floor.

**62—CHARGES FOR ALL SERVICE**

The Bittell-Leftwich Tire Co., Kansas City, charges for every item of service, canceling the charge in the case of its own tire customers. The company lost a lot of undesirable customers, but made more money.

**63—SAVED 50% OF EXPENSES**

Months ago we put in force a rule that salesmen must use street cars instead of motor cars on all preliminary work. And we send out no catalogs without a special request, and all circulars were banned. Telegraph and telephone bills were banned. We salvage all rubber, but not waste paper. We lost 24 men and our sales force has been cut 66 2/3 per cent. and service 50 per cent. Women are working in the office. We estimate that our saving in this manner has averaged 50 per cent.—F. A. Hinchcliffe, Jordan, Boston.

**64—AVOID UNPROFITABLE WORK**

F. C. Dobson, manager of the Bittell-Leftwich Tire Co., Kansas City, has such records kept that he knows each evening the day's business—and gives orders the next morning that such transactions as have not shown a profit shall not be repeated.

**65—CARE IN ORDERING PARTS**

The Miller-Ray Motor Co., Denver, is educating all dealers carefully how to order parts to save delay and expense, and is cutting out much unnecessary telegraph and telephone expense.

**66—BOY DOES THE JUMPING**

An accessory dealer, who has all customers waited on at a counter, is employing young boys to get goods from the stockroom at the command of clerks, the latter keeping their places at the counter.

**67—TRAINED SERVICE LASTS**

Closed down service station from 6 p. m. Saturday until 8 o'clock Monday

morning. Did away with coupon system of service. Work entirely along recommendations of State Council of Defense. Now give but thirty hours of mechanical adjustments. Cut out free greasing and oiling which is not a mechanical adjustment. No longer take out the squeaks free.

Sales and service men meet once a month. Discuss ways and means of reducing running expenses.—A. C. Hine Co., Hartford, Conn.

**68—CUT RENT 40%**

Our location was too good an asset to give up. So I leased my service station floor above; put in a partition in the salesrooms and brought the service department downstairs. It took some planning but I made room for it. I am not too crowded, and I am saving 40 per cent. in rent a year.—A. H. Sowers, Fulton truck, Boston.

**69—TRY SOME BOYS**

A Kansas City negro, specializing on oiling cars, employs negro boys 12 and 14 years old to do most of the work—apt pupils who under his watchfulness do the work well.

**70—THOUGHT AVOIDS RUSH ORDERS**

The Denver Auto Goods Co. claims many rush orders are due to carelessness and is cutting down a great deal of telephone expense for special supplies.

**71—KEEP CUSTOMERS FROM STOCKROOM**

An accessory dealer is building a counter which will keep customers out of the stockroom; the business lost because customers won't see more things to buy, will be made up for in service to customers who know what they want.

**72—MADE WASTE SPACE PAY**

Accessory section was condensed; more space for cars and better opportunity for displays.—A. C. Hine Co., Hartford, Conn.

**73—SELLS HIS WASTE PAPER**

A short time ago I heard of a company that bought up old paper. It set me thinking. I had been paying the city seven cents a barrel to cart it away. The price was going up to 11 cents. I had our force salvage the paper, and we sell it now, leaving fewer barrels to be carted away. So we make a profit on both ends.—W. S. Jameson, Paige Detroit, Boston.

**74—MACHINE SAVES 3 BOOK-KEEPERS**

The Equipment Co. at Kansas City has installed bookkeeping machines instead of help, which was needed on other work, replacing three bookkeepers and reducing time wasted in tracing errors.

*You Will Find More of These on Page 99*

## Ways You

# Can Handle Used Cars

### I—Sell on commission

### II—Buy outright and sell practically as is

### III—Buy, rebuild and sell

#### I—Selling on commission.

This method of operating requires little capital but is not the most satisfactory way of handling used cars. In the days of trading it was satisfactory because it tended to decrease used-car difficulties and lessened the used-car business. But when volume of used-car business is desired it is not the best method.

In commission selling the price the owner wants you to get for the car generally stands in the way and causes the cars to stand unsold on your floor. There is also the necessity of continual dickering with the owner.

#### II—Buying outright and selling practically as is.

This requires some capital to carry the stock, but does not require much shop equipment. It is a satisfactory method for the dealer who never had much of a service station.

In this case the cars pass completely into the hands of the dealer and he is enabled to concentrate his sales effort on his own merchandise with the assurance that whatever profit he makes will be due to his own hard work.

The business, however, is not the complete used-car business as is that in Plan III.

#### III—Buying outright, rebuilding and selling.

**A—Semi-rebuilding**—In this case the car is made to look well, obvious faults are corrected, it is touched up here and there where shop labor will show to best advantage, and the result is a pretty good car for the price.

**B—Complete Overhauling**—On work of this kind exceptional care must be taken that the car is bought at a price that will net a profit after the overhaul has been made. Careful checking on a repair form is necessary and accurate information must be in hand as to what the car will sell for before an offer can be made for it. In this work the used-car inspection forms developed by Motor World and now sold by the U. P. C. Book Co., 241 West Thirty-ninth Street, New York, should be used.

**C—Adding Special Bodies**—For this work almost any price or make of car may be bought, but the chassis must be one which has a great deal of service in it, and which can be overhauled at not too great an expense. Probably best results will be secured by buying old cars of high-grade makes, with very obsolete bodies but good service left in the chassis.

This chassis should be put in good condition and the prospect should be shown that it will run well. After just enough of a demonstration to convince him of the good condition of the chassis he should be taken away from it and into the office where the remainder of the sales has to do with the special body.

The dealer should have arrangements with one of the numerous special body builders who are anxious to develop a dealer business. These body men can give a fixed price for bodies of certain types for different cars and will turn the finished body over to the dealer ready to be attached. Special wheels are sometimes supplied.

The selling of the body can be done from photographs and catalogs, which are supplied by the body builders. As soon as the dealer makes a sale he should photograph the "new" car, having taken the precaution to photograph the old car when bought, as this makes excellent selling evidence.

By this new body method many of the old cars can be made into snappy new models, and there is the added sales argument of exclusiveness, for these models do not look like any of the thousands of standard makes seen on the streets, and when monogrammed and labeled with a distinctive mark are mystifying even to the man who thinks he knows everything about cars.

### How to Get Used Cars

**1—Circularize** a list of prospective sellers. This is much the same as the well-known circularizing of prospective buyers, except that the plan is reversed. Get a list by:

**A—Watching** license numbers of likely looking sellers on the street.

**B—Asking** garagemen what cars are being little taken out.

**C—Selecting** from the state license lists those makes you would like to buy.

Compile a list just the same as in selling new cars and send out this letter:

### Buying Letter

*Do you want to sell your motor car?*

*If you aren't using it very much these days the time to convert it into ready cash is NOW.*

*It is possible to dispose of used cars now because there is a scarcity of new cars. The demand for new cars is greater than we can supply.*

*But as soon as the war ends the whole demand is going to be for new cars, and then used-car prices will drop. The time to sell is now.*

*Probably after the war you will want to trade your car in on a new one, and when you do you will not be able to get as much as you can get now.*

*If you will permit us to look at your car we will make you an offer for it.*

*Returning the enclosed postcard obligates you in no way whatsoever. It is merely your invitation to us to make you an offer, which you may decline or accept as pleases you.*

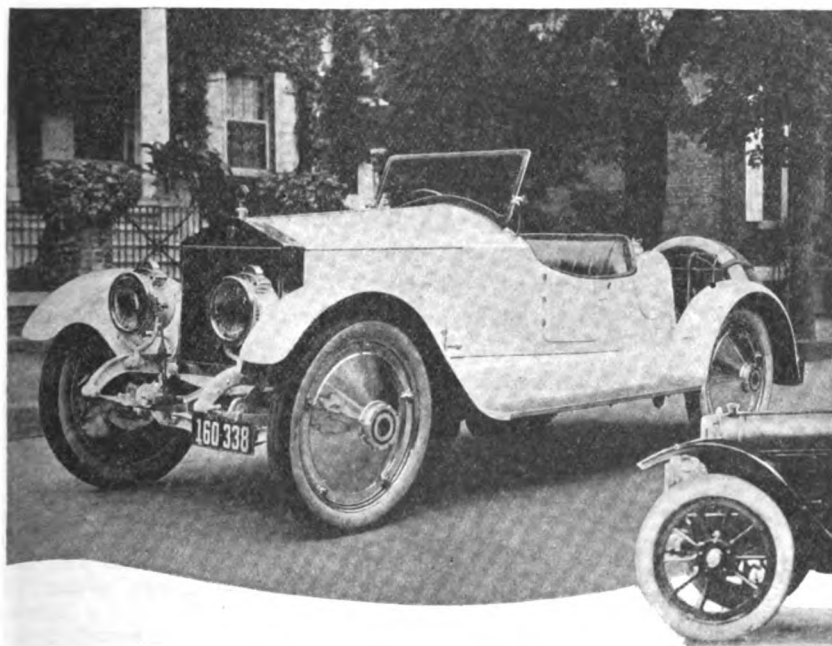
*Or phone 7777.*

**2—Advertise**—Use display and classified space, stating that you want to buy cars. You can make some of the ads specific by asking for certain makes of car for which you know you have a prospective buyer waiting.

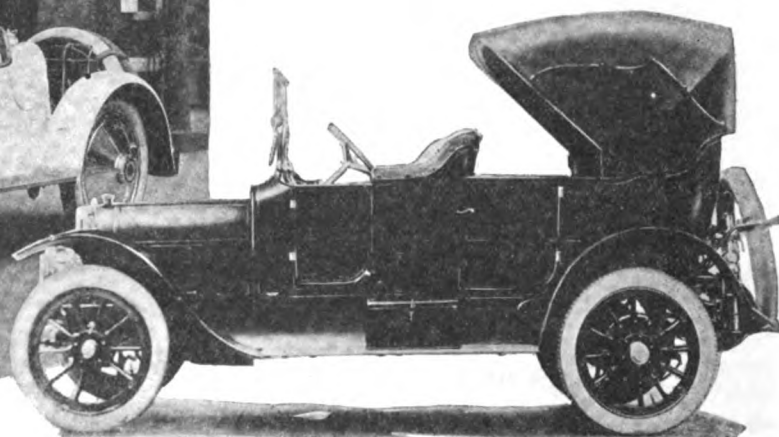
**3—Personal Canvass**—Send your used-car buyers out to call on owners, working the prospect list as in car selling. When you see a car at the curb ask the owner if he wants to sell. If there are dull times in any nearby town canvass it for buying. Only those towns should be canvassed which are within profitable driving distance.

(Continued on page 98)

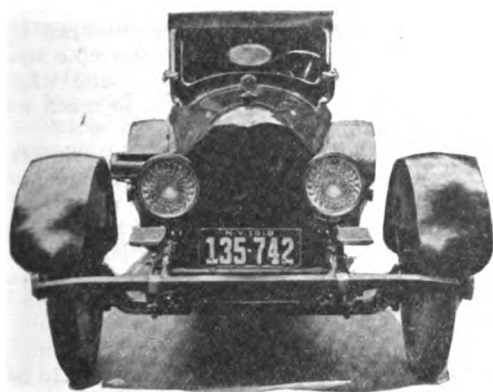
# Make The Old Cars Into New Ones



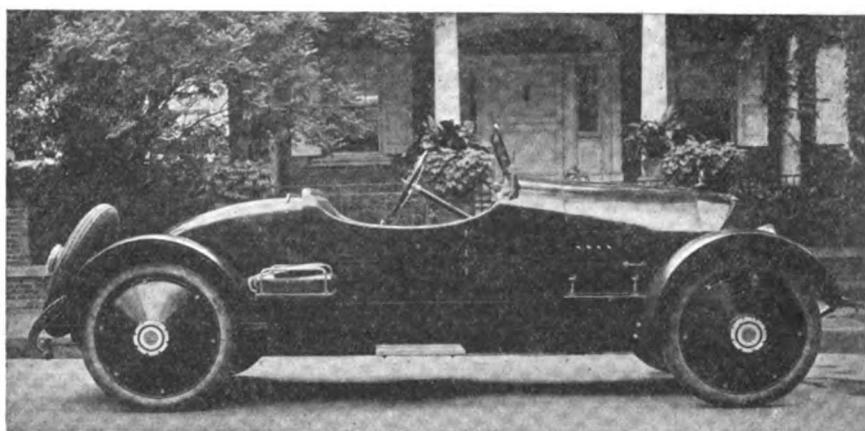
Special Bodies Can Make  
Some Old Cars Look Better  
Than Lots of New Ones



*The car at the left is the same car as the one at the right. You'd never believe it, would you. But the dealer took an old Singer chassis, which was in good condition, and added a Schutte body and disc wheels—and there you are. Bodies can be added for as low as \$500*



*Here's how the front end of an old car will look to the buyer when re-bodied*



*Disc wheels are a little thing but they make a lot of difference. Even these and a coat of paint will make any modern or semi-modern car look wonderfully different*

**P**AINTING cars is the most profitable form of car improvement there is.

If you paint a used car at a cost of \$30 you can get several times that amount above what the unpainted car would bring.

Painting your used cars is the most profitable part of overhauling because the labor and materials used bring in the biggest return. You can do hundreds of dollars of work on the "internals" and it won't affect the price as much as a good coat of paint.

1. Start a paint shop in your own building. Hire a painter who knows his

business and repaint cars you are going to resell.

2. Solicit car owners for repainting work. When a car comes in for any work whatsoever make an effort to sell the owner a repaint job.

3. If you have difficulty selling him a repaint job, sell him the materials with which he can repaint his own car. This is a sure way of making profit on the job. If you do the work yourself some unforeseen happening may reduce your profit, but if you sell him brushes and paint your profit is made and the deal is practically ended. Furthermore, he will come

to you for advice on the job and you can sell him various re-equipment fittings and accessories. Get a small stock.

4. And try to sell every car owner a re-upholstery job. Show him samples. There are styles in upholstery just the same as in furniture or shirts. Show him how the fabric will look on his car. Stretch a piece over the cushion. If you can't do this work yourself, get it done by a trimmer and make a profit on the upholstery and maybe on the work too. Paint and upholstery can make an old car so new the owner would never know it was the same car.

---

*This is one of the most important factors in helping the dealers and shopmen get by during the coming months. It will also prove valuable schooling for the after-war period. Service should always be made to pay. It always should have been made to pay.*

---

# Make Service Pay And How to Do It

## Check Up Your Assets and Liabilities

### Assets

- 1 — Cars on hand to sell.
- 2 — Parts on hand.
- 3 — Cars in operation in territory
- 4 — Repair labor.

### Liabilities

- 1 — Overhead.
- 2 — Operating cost.
- 3 —
- 4 —

**A**FTER you have found what your liabilities are you must make your assets exceed your liabilities. Then service will pay.

For example: If your liabilities are \$8000 a year, or month, you must derive from the asset side enough to amount to more than \$8000.

You must also, as far as is safely possible, decrease your liabilities and increase your assets.

#### Decrease Your Liabilities

1—Cut out all unnecessary expense. Ideas on this subject may be found on pages 12 to 16 of this issue.

2—Don't decrease your shop force. Retain it and KEEP IT BUSY. The more men you can keep working the more money you can make. Labor is one of your assets. Don't decrease an asset.

3—Don't cut wages dangerously. If labor costs \$6 an hour SELL IT FOR \$12 AN HOUR. Make it pay. It sounds like a hard job—and is—but CAN BE DONE.

#### Increase Your Assets

1—Get a real accounting system in your business so you will know what you are doing. If you operate otherwise you haven't much chance of making your service pay.

2—Revise some of the false charges you may have been making.

a—Demonstrating expense should be charged against sales, NOT against service.

b—Policy labor should go against overhead, or something else, and NOT against the shop. Give the poor shop a chance to pay.

c—Guarantee labor also is NOT a shop charge. If it is work done on a defective part it should be charged against the parts department, which should stand for its own faults. The shop is NOT to blame.

3—Operate a regular manufacturing plant, turning out finished wares, with each department paying its own way.

4—If the garage or shop is 40 x 40, which is 1600 square feet, and if the running cost per month is \$1600 each foot costs \$1. If the parts department has more than it needs and isn't coming across with its share, cut down the space and give it to some department that can use it. Or, divide the expense in some other way. But make each department carry some of the overhead—and make that department PAY.

5—Make every job that goes through the shop pay. To this you must KNOW WHAT EACH JOB COSTS. You MUST NOT GUESS. Accounting is imperative.

6—Put in a helper system, by which is meant a plan whereby semi-skilled men—or women—do semi-skilled work and skilled men concentrate on skilled work. Don't have high-priced men doing cheap work. This point is one of the greatest essentials. Letting costly men do cheap work is one of the biggest wastes in shop management.

7—Apply the test to your different re-

pair jobs, number the jobs that can be standardized and, by test, determine how long such a job should take and what should be charged for it at so much an hour. For example:

a—Make cleaning carbon and grinding valves Job No. 1. By test you may find that this takes 4 hours. Your accounting tells you that every hour of shop labor must bring in 75 cents in order to yield a profit. Therefore, for this job you charge \$3. And you insist that each such job be done by your job in 4 hours. To make sure you are getting maximum efficiency you train one or two men to do carbon cleaning and valve grinding and turn over to them every such job. This will enable you to have this work done by a specialist who is still a semi-skilled man and costs less than a top-priced man.

b—Make adjusting brakes Job No. 2. Train a helper in this work, insist that it be done in so many hours and charge for it by the job.

c—Make oiling and greasing Job No. 3 and train a helper in this work.

d—Make taking up bearings Job No. 4 and fix a time and charge. All such work as taking off the pan and getting ready is helper work. The skilled work is done by a skilled man and the job is finished by a helper.

8—Make the parts department pay. Require somebody to pay for every part that is issued. If cotter pins are issued for a job keep track of them. If waste

(Continued on page 98)



# How to Sell Tractors

## In the Winter Time

*ON cars there is what used to be considered a closed season—the winter—because cars could not well be used in sections where the snow is deep and roads bad. But with the tractor there is NO closed season. In fact, a tractor can be used the year around, and the farmer has more time in the winter to talk about buying one*

*than he has in the summer. Experienced tractor dealers state the preceding facts. Dealers who have sold tractors for some time say they can sell in the winter just as well as in the summer, wherefore the tractor provides a fine means of taking the slump out of winter business when the dealer combines cars and tractors.*

### Letter No. 1

On your farm it is necessary to have men and horses for one reason—to create power.

If you can get a machine to furnish the power you need fewer men and horses.

And horses are costing more to keep and men are harder to get.

In addition to plowing about four times (or three times) as fast as horses a tractor can do all your power farm work. It can cut ensilage, saw wood, run the fanning mill, shell corn, pump water and do anything that requires power.

The time to buy a tractor is NOW—for two reasons.

1—You can use it NOW.

2—Prices are likely to go up in the spring.

### Letter No. 2

If you are going to use a tractor next summer you will save a lot of time if you will learn how to operate it NOW.

We have a tractor at No. 777 Blank Street and shall be glad to show you all we can about tractor operation. Of course, all tractors are different, the same as motor cars are different, but there are certain things about operation that are the same.

This applies especially to the handling of plows and other implements that are used with the tractor, both in the field and on belt power.

Drop in and take a turn at running this tractor. That's what we have it here for.

### Letter No. 3

If you put \$1,200 out on interest at 6 per cent from now until May 1 it would bring you in about \$35.

If you invest it NOW in a Strongman tractor it is likely to bring you in three times \$35. We cannot tell what the price will be next spring but we do know that labor and materials get higher and scarcer every day and it keeps costing more to make the tractor. One thing we KNOW, and that is the price will NOT be lower.

The time to buy is NOW.

Drop in and see this tractor and learn for yourself just what it can do on your farm.

**1**—OBVIOUSLY, the first step is to get an agency. If you have no agency do not operate on the assumption that you must wait two or three years to see whether the ultimate design of tractor is to have two, three or four wheels. All kinds are running to-day and doing satisfactory work—and that is all the farmer requires. Get a good tractor of some make and begin NOW to get into the business. Don't wait until all your competitors are recognized as the tractor leaders.

2—Get a prospect list. Have an organization conference and note down on cards all the likely prospects you can think of. Put down all the data you can think of about them.

Get a map to help your memory and go over it road by road and select names.

Get from the county or state records a list of the farms and list all those above, say, 50 acres.

3—Get from farmers their ideas on what they expect a tractor to do. Do this by:

a—Letters.

b—Personal visits.

c—Telephone calls.

Possibly you can arrange for a Grange meeting to discuss this question and maybe you can get yourself invited to listen to the discussion and to answer questions.

4—After you get a good idea as to what a tractor should do use these ideas in your sales work and send out form letters every two weeks about as given above.

5—Get literature. If your factory can't supply you with literature have some printed. Send this to farmers, throw it in their wagons at the sheds and curbs in town.

6—Advertise in the newspapers that have country circulation, using the same arguments given in the sales letters.

7—Try to make appointments and then call when the farmer is least busy and have a long talk with him about buying a tractor.

8—If possible, secure a vacant store or building where it is seen by all the farmers who come into town, light it brightly inside, put a sign over the front, have a telephone for the farmers to use, have chairs to sit in, a city director, other con-

veniences, and invite the farmers in to see the tractor. Have a man there to answer questions and take names when he can get them but not to do any hard selling. Let him advertise and secure leads for the sales force.

9—In each locality in your territory select the most likely prospects and try to sell one of them a tractor. Get at least one tractor running in each locality, as it will be an advertisement for you and sell more.

10—Get testimonial letters whenever possible and use them to the limit. There is nothing so effective with the farmer as some other farmer's word.

11—Make up a list of manufacturing and other plants of good size where you think a tractor might be used for belt work and hauling and see if an entry cannot be made into this field.

12—Don't forget to remind the farmer that, if few neighbors have tractors, he can hire out at a good profit to himself.

# Half a Hundred Ways To Do It

## 1—DEMONSTRATE YOUR TRACTOR

The tractor is of no use to the farmer unless it will plow his ground. Personal demonstration is primarily essential. Forget that it is slow traveling. Take your tractor to the farm. Prove what it will do. No other argument will win. No other is needed.—John M. Robbins, sales manager W. L. Huffman Automobile Co., Omaha.

## 2—LIGHT SERVICE FIRST

One dealer frankly tells his customers that tractors as well as motor cars and trucks nowadays are mechanically accurate when leaving factories, but should be put on light duty for two or three months if the maximum life of engines is expected. This talk expedites deliveries, especially in winter, and prevents disappointments.

## 3—BUY NOW! BUY NOW!

George W. Smith, Denver, Fitch four-drive distributor, uses the winter months for a heavy sales campaign by mail, telling prospects they may not be able to get a tractor when they want it in the spring unless they buy in winter.

## 4—DEALER'S OWN GUARANTEE

One dealer guarantees his tractor to give satisfaction—and he hasn't the backing of the factory either. He has taken back only two in 18 months, but has made sales in the neighborhood where these two were used.

## 5—FIELD DAYS FOR TRACTORS

Holding field days on farms in various parts of our territory is an effective way of selling tractors. In other words, demonstration is the key. Our agent sends circular invitations to the farmers and advertises and he serves luncheon at noon. All features of spring farm work are handled: Plowing; disk-ing, harrowing and seeding. We shall have these demonstrations at Red Wing, Minn.; Aberdeen, Sioux Falls, Mitchell, S. D.; Helena, Bozeman, Great Falls and Billings, Mont. Every feature of the tractor is displayed and a lot of work is done for the farmer that offers his field. Gas and oil consumption and mileage are considered. An acre can be plowed in an hour, two acres can be harrowed and two seeded in an hour. We employ an operator and a helper in this work and sometimes the attendance runs 75 to 100 farmers.—W. R. Stephens-Pence Automobile Co., Sampson tractor, Minneapolis.

## 6—SELL AT THE WINTER FIRESIDE

Logical time to develop tractor business is in winter. The farmer or prospect has time to listen to you; in fact, he is glad to have someone come in and talk to him. Go after him; don't wait for him to come to you. Explain just what your own machine is; never mind

what your competitor has; by all means stick to your own outfit. Prove to him as well as figures can accomplish that tractor means economy. Show him how it will do so much more work than horses; how it will plow, harrow, fill his silo and furnish power. Show him how it can be used down in the back lot clearing up the ground. Give him the straight-from-the-shoulder facts and refer to satisfied users who conduct big farms.—Elmer Automobile Co., Fordson, Hartford, Conn.

## 7—PLAYS IT SAFE

The Norton-Buick Co., Denver, Sampson distributor, guarantees its tractors to work at less than the catalog capacity rather than at full capacity, in order to guard against trying to do too much and getting dissatisfied.

## 8—TRACTOR SALES MEETINGS

Learn to solve the problems of your prospect by placing yourself in his position. Hold salesmen's meetings. Ask each other the hardest questions you can think of. Try to produce unanswerable arguments against the sale. Let the answers be found in these meetings. Prove them by cost charts, and be sure the charts are without flaw.—John M. Robbins, sales manager W. L. Huffman Automobile Co., Omaha.

## 9—PLAY TO THE BANKER

The Cleveland Tractor Sales Co., Milwaukee, impresses every dealer with the desirability and necessity of inviting the local banker to every demonstration, so that the matter of financing the dealer's business will be facilitated by a direct knowledge that the tractor is really deserving of being used as the basis of credit, as a real, tangible, practical instrument of the first importance on the farm. In other words, the dealer is urged to "sell" the banker as well as the farmer.

## 10—MAKE DEMONSTRATIONS PAY

When you give a demonstration make it pay. Not long ago we had an urgent prospect in a community where we had no tractor. We sent one out, but we wrote 50 letters to farmers in that neighborhood. Most of them came, and that demonstration made three sales.—Milton Koenig, Weber Implement & Automobile Co., St. Louis.

## 11—FIND WINTER USES

The Miller-Ray Motor Co., Denver, Plowman distributor, emphasizes use of tractor to haul sugar beets and other crops to market in winter.

## 12—STUDY HORSE'S SHORTCOMINGS

Study what it costs to feed a horse the year round. Learn how often the horse must be shod, and what the expense. Learn the cash value of a horse,

his harness and wagon. Find out the average working life of the horse. Do the same in every detail for the tractor, and include relative proportions of risk in accident to the finest detail on both sides. When you know these facts you can sell tractors.—John M. Robbins, sales manager W. L. Huffman Automobile Co., Omaha.

## 13—GET A NEW GARB

When I hire a salesman experienced in some other line I first strip him of all his laurels and then tell him he must learn an entirely new business.—George W. Smith, Denver, Fitch.

## 14—BORROWED ON OWN NAME

A western dealer, needing to finance his tractor business, refused an offer of a larger amount than he asked on condition of incorporating a new company—borrowed the money and kept his business in his own name. His insistence on his credit being as good under his own name as with the others in the company, was, he said, a factor in his getting the money.

## 15—FORGET THE "OTHER FELLOW"

Talk your own tractors, and don't waste time in knocking the other fellow's.—President S. E. Norton, Norton-Buick Co., Denver, Sampson.

## 16—FIND WHY HE DOESN'T BUY

Always make sure why a customer holds off about buying and help him overcome the difficulty. I found on a second trip that a farmer was not sure when he would get his wheat money and feared he would lose his 30-day deposit. So I assured him that it would stand 90 days if necessary, and got his order.—F. W. McDonald, Plowman sales manager for Miller-Ray Motor Co., Denver.

## 17—AVOID UNCALLED FOR STUNTS

J. F. Carson, International Harvester Co., Milwaukee, is opposed to "stunt" demonstrations of tractors. "Show your farmer prospect what the machine will do for him in a sensible, practical way, and keep away from 'stunts.' A farmer doesn't intend to climb the side of his barn with his tractor. It wasn't made for that purpose."

## 18—GET THE TIMBER MAN

H. W. Moore & Co., Denver, Track-layer distributor, specializes in winter on selling tractors in the timbered sections of the state for use in logging, etc.

## 19—WINTER WORK TUNES THEM UP

One dealer is delivering three tractors to as many farmers in October—sold for winter use on the argument that a tractor run on belt work using a comparatively small amount of power will be

tuned up by spring so that it can start at once on full service in the field as a tractor.

## 20—FOR SNOW-BANK WORK

H. W. Moore & Co., Denver, emphasize belt-power use of Tracklayer in winter, and also scheme of putting a shoe runner on front wheel in snow.

## 21—IT CAN BE DONE

The Colorado Tractor Sales Co., Denver, Wallis distributor, shows farmers the value of using a tractor in winter to fill silos, grade roads, grind feed and do other work at a saving of time and expense.

## 22—USE COUNTRY WEEKLIES

"Use the country weeklies to boost retail tractor sales," says J. Heiligenthal, Lyons, Wis., motor car, tractor and implement dealer. Heiligenthal is one of the best patrons of Walworth County newspapers, which reach every farm in his territory. He goes further than to advertise by displays. Every so often he gives the editor a list of the tractor purchasers, which is published together with a little article about the satisfaction given by his machines. The editor gives this space without cost, in appreciation of his advertising patronage.

## 23—LET THE FARMER DRIVE

O. F. McGinnis, manager of the Hiawatha-Buick Co., Hiawatha, Kan., gets a tractor onto a farm, and the farmer into the seat, running it—and the selling is easy. The firm took the Parrett tractor for Brown County to try out this plan—and this fall is adding four more counties to its territory.

## 24—EDUCATE IN "BUY NOW"

Send out winter letters on tractor market conditions, probable price advances, etc., and educate prospects to buy now.—H. W. Moore & Co., Denver, Tracklayer.

## 25—ADVERTISE HEAVILY BUT TRUTHFULLY

"Advertise—advertise heavily, but make it clean and truthful," says F. W. Geddes, manager of the Cleveland Tractor Sales Co., 415-417 Marshall Street, Milwaukee, state distributor of the Cleveland tractor. "Never say a word about your product in your advertisement that you can't back up to the utmost." Geddes recommends this to the dealer as well as to the distributor as a watchword of merchandising.

## 26—SOME COMPLETE SALES BY MAIL

The Kaufmann-Parrett Tractor Co., Kansas City, has sold several tractors on mail solicitation to men who, so far as the company knows, had never seen the Parrett tractor or talked with a salesman.

## 27—CARRIES TRACTOR ON TRUCK

The Cleveland Tractor Sales Co., 415-417 Marshall Street, Milwaukee, state distributor of the Cleveland tractor, makes effective use of the motor truck in merchandising, both to dealer and consumer. Manager F. W. Geddes purchased a 2-ton Nash truck with ordinary stake body, and carries a Cleveland tractor direct to the farms for immediate practical demonstration. During the last four or five months the truck has traveled about 5000 miles in this territory, and the success of the idea, which is original with Geddes, has been thoroughly demonstrated.

## 28—EDUCATION ENDS SERVICE

If a tractor is well sold, the owner well drilled in its use, the service problem is mostly solved.—W. S. Roberts, J. I. Case T. M. Co., St. Louis.

## 29—ON THE JOB EVERY MINUTE

A farmer's threshing was being badly delayed by his waiting for a steam outfit working in his community, and a neighbor lent him a Wallis tractor and helped him rent a separator. This made a sale for the Colorado Tractor Sales Co., Denver.

## 30—GET AFTER THE LIVE ONES

The Hiawatha-Buick Co., Parrett dealer at Hiawatha, Kan., operates on the theory that while every farm should have a tractor, efforts to sell should be made to farmers who are able to buy and who have a definite use for tractors.

## 31—MAKES FRIENDS AND SALES

George W. Smith, Denver, Fitch distributor, watches for farmers having tractor trouble and stops to help them out. This makes friends and leads to sales.

## 32—POWER EQUIPMENT GIVES LEADS

The tractor dealer must have some other item of farm power equipment with which to effect his contact with the farmer in the winter and lay the foundation for tractor selling in spring.

## 33—MAKE THEM ASK QUESTIONS

Get customer to ask questions about what tractor will do, and then explain technical parts as you answer his questions.—F. W. McDonald, Plowman sales manager Miller-Ray Motor Co., Denver.

## 34—SHOW HOW TO REVAMP FARM

C. H. Bantley, manager of the Bantley Sales Co., Kansas City territory distributor of the Bates Steel Mule, suggests that tractor salesmen can frequently point out readjustments of farm practice to fit a tractor instead of trying to make the tractor fit the farm practice.

## 35—GET LIVE CAR DEALERS

Get live car dealers for your outside

territory, because they know how to take care of a man with service after he has bought.—Norton-Buick Co., Denver, Sampson.

## 36—CAR KNOWLEDGE HELPS

Nearly every tractor buyer is a motor car owner. Tell him the care and handling proposition of the tractor is like that of his car.—Leroy McKenzie, J. I. Case T. M. Co., St. Louis.

## 37—KIND DEED MADE SALE

The Norton-Buick Co., Denver, furnished a farmer a Sampson tractor to help him finish emergency plowing. As soon as he sold his crops he came in and bought a tractor.

## 38—FOLLOW-UP DOES IT

The Kaufmann-Parrett Tractor Co., Kansas City, has made 5 per cent of its sales on mail follow-ups.

## 39—SHOW WINTER USES

The best winter tractor service is to persuade the owner to haul manure, saw wood, etc., with his tractor. Then he will see it often and keep it in shape so you will not be called on to overhaul it in the spring.—William A. Flamm, Weber Implement & Automobile Co., St. Louis.

## 40—SHOW GOVERNMENT FIGURES

For winter tractor selling show a farmer the Government figures on the increased fattening value of ground food for stock. Then show him at what low cost a tractor will do his grinding.—George W. Smith, Denver, Fitch.

## 41—IN WINTER GET READY

December, January and February should be busy months with distributors. It is the time to line up new dealers, educate them on tractor ideas and get ready for spring. The dealer should get his prospects lined up, send them educational literature and prepare for an early spring demonstration to the group.—William A. Flamm, Weber Implement & Automobile Co., St. Louis.

## 42—START COMMUNITY SCHOOLS

Help tractor sales and satisfaction in general by organizing community meetings for instruction in handling and caring for a tractor.—Norton-Buick Co., Denver, Sampson.

## 43—SELL OWNER'S NEIGHBORS

Direct your winter selling efforts toward neighbors of a man using your tractor. They have seen the tractor work, know how nearly their land is like his. Use his work last summer as your demonstration.—Milton Koenig, Weber Implement & Automobile Co., St. Louis.

#### 44—STAGING TRACTOR STUNTS FOR PUBLIC

A. H. Sowers, Boston, who took on the Cleveland tractor for eastern Massachusetts and Rhode Island recently, is not wasting any time in bringing its merits

to public attention. Across from his salesrooms on Commonwealth Avenue is a big vacant field, and he has hired this on which to give public demonstrations of what the tractor can do. He had some prospective purchasers out there a few

days ago watching what the Cleveland was able to do, and when the influenza ban is lifted he intends to put up a sign inviting the public to come on the field at stated hours when he will stage exhibition stunts.

## Some Mistakes You May Make in Selling Tractors

### 1—DON'T REFER TO CATALOG

Don't ever have to refer to your catalog to answer the question of the prospective customer. Know your tractor so thoroughly that you can answer instantly any question the prospect may ask. The catalog is primarily for your study—but not before customers. By the time you face them you should know all there is to know about your stock. The man who answers first is the man who makes sales.—John M. Robbins, sales manager W. L. Huffman Automobile Co., Omaha.

### 2—DON'T STRETCH THE TRUTH

The biggest pitfall in tractor sales is stretching the truth, telling a prospect that the tractor will do impossible things. If a farmer has a soft piece of ground, that is just where he wants to work you out on a demonstration, the place he would look to last if using horses. The salesman should know his own machine and talk about it convincingly. Show the prospect what the tractor will mean to him when labor is scarce. If my machine will not fit his work I pass him up. I never talk about the other fellow's outfit, it is none of my business. Winter and early spring are the best seasons for sales. I made my first sale last New Year's day. When the buyer gets his machine I see to it that he learns it thoroughly.—Fred L. Bragg, the Britton Co., Moline, Hartford, Conn.

### 3—DON'T START 'EM WRONG

Don't dump a tractor onto a customer without teaching him how to fill the crankcase and adjust the carbureter, oil all parts, etc.—Norton-Buick Co., Denver, Sampson.

### 4—DON'T OVERLOOK A BET

Don't skip technical points of tractor construction which show how to adapt power to a wide range of farm uses.—Colorado Tractor Sales Co., Denver, Wallis.

### 5—GET OFF THAT STUFF!

Don't talk looks or comfort or any of that line of stuff, but get down to heavy construction, simplified ignition and carburetion, etc., and show the customer he is investing in something to save money and make money.—Colorado Tractor Sales Co., Denver, Wallis.

### 6—DON'T PROMISE TOO MUCH

Never overestimate your tractor. Play safe and give your customer more than you promise him.—George W. Smith, Denver, Fitch.

### 7—DON'T "BARNSTORM"

Keep away from all whoop-'em-up talk. Show your customer the constant pulling power, the work a tractor will do and the money for horse feed and hired help it will save.—Colorado Tractor Sales Co., Denver, Wallis.

### 8—TELL 'EM WHAT'S WHAT

Don't let a customer imagine he has to keep his tractor going constantly to keep it from losing money. A tractor isn't a truck.—President S. E. Norton, Norton-Buick Co., Denver, Sampson.

### 9—DON'T ENTER FREAK TESTS

Don't agree to any demonstration tests liable to cripple a small tractor at a show. That is liable to arouse suspicion about all tractors.—George W. Smith, Denver, Fitch.

### 10—DON'T FORGET THE WIFE

"Don't forget the female element," said E. A. Braun, Milwaukee, sales manager of the Trenam Tractor Co., Stevens Point, Wis., in admonishing dealers to pay particular attention to the wives of farmers when demonstrating and making sales. Braun's experience has been that the wife is just as big a factor in tractor selling as in passenger car merchandising—and every dealer knows that she is a real factor there.

### 11—DON'T SELL THE WRONG MACHINE

"Don't sell a 100-acre farmer a tractor designed for a 300-acre farm, and don't sell a 300-acre farmer a 100-acre type tractor," said F. W. Kamm, sales manager of the tractor division of the Allis-Chalmers Mfg. Co., Milwaukee. There is no greater detriment to tractor business extension than unloading the wrong machine to suit the purpose, he says.

### 12—"GO SEE JONES PLOW"

Much time is wasted with demonstrations. Tell the farmer to go over and see Bill Jones' tractor. He will try to tell you his field is different, but usually it is not.—W. S. Roberts, J. I. Case T. M. Co., St. Louis.

### 13—BE SURE IT FITS

The one big mistake in tractor selling is to sell a tractor that will not do the work required.—W. S. Roberts, J. I. Case T. M. Co., St. Louis.

### 14—DON'T TALK GENERALITIES

A salesman must know exactly why a competing tractor shows lower operating costs—and know what to say—without knocking every tractor that has one or more points on his own. A lower priced tractor may have lower operating cost, won't last as long, higher cost of parts—but these may not be referred to as disadvantages. A tractor with higher operating cost than the salesman's may last longer than his, with fewer repairs.

### 15—NEVER TALK SPEED

Never sell a tractor for field work on a speed proposition. Sooner or later the owner will learn what all old, good farmers know, that 2¼ miles an hour is the proper plowing and field speed until all implements are changed.—Leroy McKenzie, J. I. Case T. M. Co., St. Louis.

### 16—DON'T TELL BOMBASTIC TRUTHS

"I would fire a salesman," said one dealer, "who used as illustration of our tractor's efficiency an owner's statement of costs that was radically better than the average."

### 17—DON'T BE AN INDOOR WORKER

A Western dealer tried for four months to sell a tractor, talking to the farmer in the field, and showing prospects the tractor on his salesroom floor. No sales. He began to sell when he took the tractor into a field and had the farmer try to run it.

### 18—GET AWAY FROM "EASY" EVIDENCE

A salesman who uses figures on tractor operation that were based on level ground 6-in. plowing in selling to a farmer with hilly ground is steering for trouble.

### 19—DON'T WASTE WINTER HOURS

Long winter evenings are splendid opportunities for salesmen, studying other tractors, to meet competition when spring comes. Glittering generalities about his tractor's superiority won't go with the farmer.

# YOUR BIG CHANCE

## To Boost the Sale of Trucks

*IN years gone by the public has had its eyes fastened to the passenger car and has been eager to buy cars. Now, there are few cars to be had, their use has been curtailed, and the truck is recognized publicly and officially as a great commercial need. Labor is scarce, the expansion of business is imperative, the available means thus far have proven inadequate, and the truck fits into the scheme of business as an instrument of efficiency. The truck movement now starting will continue after the war. New and rehabilitated business will never be keen for a horse basis. The dealer who gets a grip on the truck business now will secure a fine future for himself and a good business.*

### Points on Truck Sales

1—The first step, of course, is to get an agency. Assuming that the dealer has an agency and is ready to begin operations, these suggestions will take the plan from that point.

2—Get a prospect list. (a) Set down the names of all those who are known to your organization to be possible users of trucks; (b) List the different trades in the city business directory, the telephone book, or any other book containing such information. Put these names on cards, with whatever data can be secured. Keep them separated in the file as to trades; the trucking trade in one group, groceries in another, etc. This will permit you to send special sales information to different trades.

3—List the farmers of the surrounding country who have farms of a size that, in your section, indicates need for a truck. For example: 10 acres in some Western states may be a patch; in some other sections it may be a highly productive produce farm. Keep these farmers in a list by themselves.

4—Get some sales literature from the factory.

5—Have some literature printed if there are trucks in operation locally that make good sales arguments.

6—Select a good trade that looks as though it might be a good sales field, and concentrate on it as a starter. Find out all about that line of business, reduce your data to paper, drill it into all the men, let each man understand what that line of business needs and how your truck can fit in there and help the business expand and make more money. Remember this: It is not always safe to talk lower costs unless you have specific instances in a similar line of business. The big truck sales point is expansion of business and saving of labor and time.

7—Let several of the men concentrate on this trade, if you have a large sales organization. If you are the only salesman, do the concentrating yourself. If you have a large organization, let the rest of the men work

on the general list. The big idea is to make a sale somewhere to get your truck started. Each sale makes others. The first step is the first sale.

8—Follow the same plan in the country sales work. Select some good prospect a considerable distance out on a main road and sell him a truck. As he runs this truck over the road between his farm and town he is bound to create new prospects for you. Do this on the several roads running out of town, and when you have sold those trucks, see to it that they run and give satisfaction. Place your sales in this manner all over the territory. Don't try to bunch them in one spot. They'll bunch themselves if the truck and your service are any good.

9—Similarly, if one of your trucks in the city is seen a great deal in a certain place, such as lumber yards, try to sell the lumber yards trucks. Wherever your trucks are seen in operation there are sales possibilities.

10—In starting the campaign, use a certain amount of newspaper advertising nearly every day. Don't make big shots at scattered intervals. A shrapnel barrage is a lot more effective than a 15-in. shell every two hours. Get on the financial page if you can, where business men look every day.

11—Send out a sales letter or a piece of literature every two weeks at least.

12—Revise the list every 60 days, scratching off any that don't seem worth postage.

13—In all your sales work and advertising take every advantage of trucks that have done good work locally. Nothing impresses a man more than what a truck has done for a neighbor.

14—Seek chances to get publicity. If you can, at not too great expense to yourself, do some job that would take a lot of horses; it is good publicity. Get the newspapers to print the achievement.

15—In starting salesmen at work they must be



schooling in truck selling. The passenger car man can't walk out and sell trucks without training, but, if trained, he can do it. He must learn that paint and purr don't count. He is selling transportation, and the buyers want dollar-for-dollar value. He must be able to figure costs, to analyze figures and be a real business man. A salesman who can't talk business to a business man is beaten before he starts.

16—Have frequent conferences with your salesmen.

Talk over their work. Find how they made sales and why they failed. This will prove one of your best methods of educating the salesmen in truck work and making them valuable.

17—Get good drivers for your customers. Keep in touch with these drivers and see that they operate the truck correctly, which will decrease the owner's operating costs and help you sell others. Truck drivers can give many tips on prospects.

## *And Here Are*

# More Than 100 Pointers

## *From Successful Truck Dealers*

### 1—ALL MEN LEARNED TRUCKS

Following the car curtailment news from Washington, we called our salesmen into conference and the truck and car men swapped ideas on selling. Then all salesmen were put on trucks, cars being a secondary consideration. We are selling both, but mostly trucks. It is working out well.—L. B. Sanders, Dunbar, Sanders & Bowen, Oakland and Vim, Boston.

### 2—WATCH HORSE EQUIPMENT

Watch the condition of horses and delivery wagons used by business houses who use few trucks or none. They are going to change to trucks eventually. The psychological moment for your drive is when deterioration begins to show—provided you can't land before that time. Keep records of every horse-drawn delivery wagon or truck in your territory.—Albert W. Sydney, assistant manager Studebaker Corp. of America, Omaha branch, Omaha.

### 3—SELLING TRUCKS IS SELLING MILEAGE

We go into an office and ask the manager if he knows how much it costs him to deliver. Generally he says not. Then we tell him. He is stupefied because we know more about his business than he does. We have interviewed the shipping department first. We asked how many teams he has, class of freight handled, hauling distances, etc. Then we are prepared to show the manager how he can save money with trucks. We are now investigating the routes of a big company. We offer to do the deliveries with trucks. The officials are asked to accompany the truck. We furnish the truck and a driver, the company the handlers. In this instance one truck does away with six horses, two men and eight helpers. Figures are being prepared from the trips to show the lessened cost and re-

lease of man power.—W. R. Stephens-Pence Automobile Co., Minneapolis.

### 4—GET PROSPECT STARTED

We send letters to merchants offering to get contract drivers and then advertise hauling contracts. We also give 18 months to pay for truck to give customer a chance to pay for it out of actual contract earnings.—Universal Truck Co., Denver, Diamond T.

### 5—A CONFIDENCE GAME

Selling trucks is a confidence game with us. I mean we have built up the confidence of the people in our truck, and it is based on this confidence that we make our selling campaign through personal interviews with prospects. The reputation of the truck does the rest.—H. B. Foley, Minneapolis.

### 6—REMEMBER: "TRANSPORTATION"

Let the dealer get it out of his head that he is selling mere trucks. He is selling transportation and the truck is merely incidental to that end.—W. E. Rehbein, Garford branch, St. Louis.

### 7—TALK "BUY NOW"

Price advances likely to be more than depreciation even if truck is idle part of winter. So talk buying now.—J. J. Cahill, Reo truck sales manager, Colorado Motor Co., Denver.

### 8—WATCH THE NEWSPAPERS

J. W. Maguire, Pierce-Arrow, Boston, learned that the Thomas G. Plant shoe company was planning to install an oil-burning equipment to beat the shortage of coal, and one of his men busied himself supplying information about what could be done getting the oil to the factory in a truck instead of waiting for

freight shipments. The shoe people bought a 5-ton truck which makes two trips daily to Providence getting oil, and has been able to fill its orders with no coal bugaboo. And it was a good ad for the Pierce-Arrow.

### 9—KNOW TRUCK FIGURES

When you attempt to induce a man to sell his horses and wagons and buy motor trucks he will answer that at a forced sale he will lose money on his old equipment. This is true. Yet figures honestly compiled will show that motor trucks, costing more than his horses and wagons, will still save him money in the long run. Get the figures. And be sure they are correct.—Albert W. Sydney, assistant manager Omaha branch, Studebaker Corp. of America, Omaha.

### 10—CATER TO THE TRANSFER MEN

R. E. Atkinson, with C. G. Roman-Diamond T Truck Co., Kansas City, after keeping friendly with a transfer man having a small truck for 18 months, heard of a grain dealer about to let a hauling contract. Atkinson sold a truck to the transfer man with the condition that he could get the contract; the contract was secured—the truck sale was effected, and the transfer man is to pay for the truck within a year with his earnings.

### 11—NEED LITTLE INSTRUCTION

The average farmer needs very little instruction in the handling of a truck. He has his car and he has learned his machine from that. The most important and what seems to be the hardest thing to teach the farmer is to drive his machine carefully and properly and to care for the oiling, greasing and lubricating in every way. To neglect proper lubricating means repair bills and grief. If a farmer would give his truck one-half the attention he gives his team he would never have any trouble.—Texas.

## 12—GET POSTED ON SNOW REMOVAL

Impress upon prospects that they have the Government behind them in buying trucks in winter by having your sales force familiarize themselves with what the states did last winter and what they will do this year in the removal of snow. Make it plain that Uncle Sam demands this be done, and to see that it is carried out he has taken over the entire direction of highway construction practically. This means he will order roads strengthened and widened and will help pay for this work to insure the greatest use of trucks.—W. J. Connell, Connell & McKone, Boston, Atterbury, Bethlehem and Overland.

## 13—HERE'S A PROMOTION IDEA

William Groneweg, of Groneweg & Baxter, Indiana Truck Co., Kansas City, says if he were a dealer he would this winter get two or three truck owners into conference with township and county officials and bring about arrangements for the truck owners clearing of snow from highways during bad weather. The contracts would provide work for truck owners—and would greatly increase truck business in the community.

## 14—SELL WITH SAFE LIMITS

Confine your selling talk to what your truck will actually do.—H. W. Moore & Co., Denver, Kelly-Springfield.

## 15—HELPS SALESMEN STUDY

H. M. Crisson, assistant manager of the G. G. Hamilton Truck Co., Kansas City, Traffic and Autocar, himself a mechanical expert on trucks, has the newer salesmen in his shop during all their comparatively idle moments. Saturdays, especially, these salesmen—former grocery salesmen, and from other lines, and men above draft age—help where they can, and watch and study, learning the “innards” of trucks so they can talk intelligently about them. This winter, when trucks may be left more frequently for overhauling, the salesmen will spend even more time in the shop.

## 16—FIGURE IT OUT FIRST

It is well to first ascertain from observation some of the demands of the prospective purchaser for motor trucks. Then work out rough sketch for improvement on his present installation and submit it to him with data from the knowledge you have obtained from observation and put the angle of improvement to him in a new light by doing so.—C. P. Cary, manager Garford Motor Truck Co., Boston.

## 17—STUDENT MORE THAN SALESMAN

R. E. Atkinson, C. G. Rowan-Diamond T Truck Co., Kansas City, is strong for knowing what he is talking about. He spends days, when necessary, studying a prospect's business and getting information, and he sells many trucks.

## 18—SNOW DEMONSTRATIONS

The S-R Truck Co., Denver, Bethlehem truck distributor, puts chains on wheels, mounts trailers on runners, puts all the load on trailers and pulls heavy loads over deep snow in mountainous sections where there is heavy snow all winter.

## 19—STUDY WEATHER HISTORY

Get the weather bureau reports of storms for five years back, then ask a prospective buyer of trucks to make an estimate of what it cost him during that period for delayed deliveries, loss of equipment, and measure it up with what a few trucks cost. Show him that his losses would pay for a few trucks, and point to the users of commercial vehicles who have gone through four or five winters in good shape, particularly if you can point to cases of men still running trucks they started with.—John L. Judd, Boston, Gramm-Bernstein, Columbia and Smith Form-A-Truck.

## 20—ANSWER EVERY QUESTION

I never let a prospect's questions get by without an answer that I know is right, and that I feel sure meets his problem. If I don't know the answer, I go and get it, never giving him generalities or guesswork.—R. E. Atkinson, C. G. Rowan-Diamond T Truck Co., Kansas City.

## 21—MANY PAYING CASH

Many farmers are paying cash for their trucks. Others pay about one-third or one-half cash, and they are given eight months generally on the unpaid balances. Others also pay on the monthly plan. In this country the popular sized trucks are the 1½ and the 2-ton trucks, and they are the kind the farmers should be urged to buy. That is the average farmer. There are few times in the year when he cannot use his truck.

There is the one great question which must always be considered, and that is the service question. It is the first question the farmer asks and it is the first question the merchant asks. The first thing a farmer takes into consideration

is the kind of service he is going to get and where he is going to get it. It's the big word in all business and it cannot be overestimated. Upon service depends success. When a farmer buys a truck he buys it for service. In case of an accident the first question which comes to him is where will he get it fixed and how soon can he get it done. That's one of the advantages of buying trucks made at home.—Texas.

## 22—WHAT PASSENGER CAR MAN MUST LEARN

Passenger car salesmen to take up selling of motor trucks should avoid a great many things that are essential in talking about selling passenger cars. Seating capacity, horsepower, speed and particular value of certain types of motors, transmissions or rear axles should be forgotten. More attention should be paid to economy of operation, low cost of upkeep, carrying capacity, etc.

Passenger car salesmen should study weights of raw materials so as to determine weight per cubic foot in order better to understand customer's requirements when it comes to carrying capacity. Dimensions of standard packages should be understood to talk intelligently about truck bodies, so as to inform customer as to what type of body he requires for his particular work. A great many goods handled are dimension goods that should be understood by the salesman so that he can lay out for the customer a body of sufficient carrying capacity and, knowing weight of material, advise intelligently in reference to the tonnage and capacity of truck itself.—George H. Hudson, manager General Vehicle and Walker trucks, Boston.

## 23—GET THIS

The Universal Truck Co., Denver, got some valuable advertising by using a Diamond T truck to move a small garage for a man without taking it to pieces.

## 24—KEEP THE PARTS STOCK UP

The Reddell Motor Co., Joplin, Mo., and nine other dealers in the territory, can demonstrate to customers that parts wants can be promptly filled; they, for instance, order new sets of bearings from the Service Bearings Co. at Kansas City for stock, which are packed at Kansas City and forwarded on telegraphic instructions when the dealer sells out of his stock.

## 25—SELL CONSISTENTLY

Go over a select list of prospects and explain just how our particular cars will meet their needs. We endeavor to sell consistently—that is, place cars in accordance with the work they are to do. We prefer to pass up a sale rather than sell something that will not measure up to requirements.—Colonial Automobile Co., Stewart, Hartford, Conn.

## 26—HUNT IN PAIRS

Send one man out to look up hauling contracts and have salesman follow him.—E. J. Johnson, Denver, Maxwell.

## Take No. 19 For Example

*Here's an idea that we warrant not one truck salesman in a hundred would have thought of.*

*Yet it is a perfectly good, workable idea that will sell trucks.*

*And many of the others are just as good.*

*The job of a good editor is not to get good ideas as much as to get his readers to read about the ideas.—Editor.*

**27—RENTS SALESMAN TO DEALERS**

The Universal Truck Co., Denver, Diamond T distributor, furnishes retail road salesmen to help local dealers throughout territory, and makes no charge except 5 per cent on actual sales made by salesman.

**28—SPECIALIZE ON ONE TRADE**

The new dealer should not wander in a maze of firms that need transportation. He should specialize on some line that his truck is especially adapted to. Lumber, coal, steel or whatever is a good line in his neighborhood for his truck. Then work it to the death. Other lines will open themselves.—W. E. Rehbein, Garford branch, St. Louis.

**29—SELL YEAR AROUND**

It is no more difficult to sell trucks in winter than summer with a good product. We have discouraged trading and now seek to have owners meet war conditions by giving their trucks regular overhauls to keep them in shape, making a truck last three and four years instead of one and two in the original owner's hands.—John L. Snow, Peerless, Boston.

**30—LET HIM SELL HIMSELF**

Teach your prospect to drive a truck and let him do his own demonstrating for a day.—Colorado Motor Co., Reo.

**31—BEGIN AT THE BOTTOM**

Salesmen should begin at the bottom. For example, recently I gave a big merchant data on his costs of horse-drawn equipment based on the territory he covered. He inquired how I knew where his deliveries went and I told him I spent two days in his stables checking up and conferring with his drivers. And my figures were correct.—A. H. Sowers, Fulton truck and Cleveland tractor, Boston.

**32—START ALL OVER AGAIN**

When a salesman experienced in passenger cars or some other line starts to sell trucks he should forget his sales record and himself and talk the quality of his truck and the responsibility of the firm he represents.—Universal Truck Co., Denver, Diamond T.

**33—SELL TRUCKS THAT FIT**

Our line is so complete that we can meet every angle of service. With standard lines we can take good care of the customers. We sell them what they ought to have and what we know will meet their needs. It is a waste of time and a bad effect on future business to sell indiscreetly; that is where a truck is not fitted to the work.—Hartford Buick Co., Buick, G. M. C., International, White, Hartford, Conn.

**34—PAY FOR "GOOD SAMARITAN"**

The S-R Truck Co., Denver, heard of a loaded truck disabled by a street car and gave the owner the use of a Bethlehem truck to finish the day's work. He bought a Bethlehem next day.

**35—KEEP IN CLOSE TOUCH WITH CUSTOMERS**

In a general way we make an effort to keep in very close touch with all companies and individuals in our territory who have any transportation problems and offer the services of our salesmen, who are really sales engineers, by giving advice as to how a saving might be made in making deliveries of their goods, and we find customers are very glad to take advantage of this service.

We have an inspection which keeps trucks moving the largest average number of days in a year, and we find this of considerable value. We aim to give the very best possible service in a most economical method without wastage, and everybody in our company is endeavoring to conserve time, not spending it on matters of little consequence, but putting in their hours during the day on work that is of value and that will help the entire transportation problem, which is growing in importance all over the country.—George N. Hudson, manager General Vehicle and Walker trucks, Boston.

**36—KNOW PROSPECT'S BUSINESS**

We become thoroughly familiar with the business of the prospect. When we call on a man we know just how to go at him. We follow the same plan summer and winter, just a simple case of hustle, keeping everlastingly at it. We sell the man what he requires, and if we know he is wrong in his selection we straighten him out.—Russell P. Taber, Inc., Republic, Reo, Duplex, Hartford, Conn.

**37—SHOW HOW TO MAKE TRUCK PAY**

Tell a winter customer to hire out truck for local hauls when he doesn't use it and thus make money on own spare time.—S. B. I. Motor Sales Co., Denver, Wilcox.

**38—EDUCATE FARMER USERS**

The average farmer doesn't know what the truck is worth to him. As soon as it is explained the amount of tonnage a truck will handle as compared to what a team can do in so many given hours of time and what it costs for both, he is easily convinced that the truck will do as much work as three or four teams at much less expense. The farmer doesn't take the care of his truck he should. If he will keep it out of the weather, never overload it, drive it conservatively and, in brief, take care of it, a high-grade truck will give him service on the farm for 10 years. Otherwise if he leaves it exposed to the weather, puts 2 tons on a 1-ton truck, neglects the oiling and lubricating and has a careless driver, it means a very expensive investment and, in brief, a very unsatisfactory investment all the way through.—Texas.

**39—SPECIAL TRUCK STUNT**

The United States Government at the Presidio, San Francisco, found it necessary to move a 15-ton cannon. The Gar-

ford company loaned them a 5-ton truck. It carried the 15-ton cannon and, to the surprise of everyone, delivered it up a severe grade with no apparent injuries to the truck, demonstrating that trucks can be used in all work where special wagons had been used in the past.—C. P. Cary, manager Garford Motor Truck Co., Boston.

**40—FORGET "EASY RIDING"**

Talk stability and economy—not fine finish or easy riding.—Colorado Motor Co., Denver, Reo.

**41—SELL FOR SPRING DELIVERY**

A big idea is to sell for spring delivery. There is always the prospect of car shortage or a raise in price. We urge upon prospects the necessity of early orders. Many salesmen make the mistake of merely selling. They must familiarize themselves with the prospect's requirements. They think only of the present. Every unwise sale is bound to work harm for the future. We advertise much heavier on trucks in winter than in summer. We have consolidated our selling forces and are 100 per cent trucks.—Russell P. Taber, Inc., Hartford, Conn.

**42—PHOTOS OF PERFORMANCE**

The Alfred Reeke Co., Milwaukee, keeps a photographic record of every truck it sells, which is kept in the old-fashioned album form in the salesroom. Extra prints are made so that smaller albums can be provided for use of the salesmen. The photographs are taken when the truck has been delivered and is in actual use, and tells the prospect more than a "still life" picture taken against a white sheet background and retouched. These look too "stagey."

**43—CO-OPERATIVE COAL TRUCK**

The Norton-Buick Co., Denver, induces coal haulers to get together and use a G. M. C. truck.

**44—SALESMEN TALK ENGLISH**

Our salesmen sell trucks simply by talking English and using convincing arguments. We meet the requirements of the buyer. If he wants the best and is willing to pay for it we generally get his order. We sell for cash only. We think this is the only way to do business.—S. A. Miner, Pierce-Arrow, Hartford, Conn.

**45—SOME AD!**

An oil company in Wyoming had to move a 14-ton engine base 55 miles over a bad road, and a contractor agreed to move it in a week with 24 head of horses. The White Motor Co., Denver, got a Wyoming customer to make the haul by placing 12 x 12 timbers from truck to trailer and hanging the engine base beneath timbers with steel cables. The haul took 48 hours actual running time, and cost about a third the horse-haul bid.

(Look on Page 28)

"TOMMY," said Reilly, sliding himself onto the corner of his sales manager's desk, "we're going to lose a few of our dealers as sure as flivvers are flivvers."

"I suppose so," remarked Tommy Trumbull, "and I don't see that there is much more that we can do. We've done a lot to keep them going but there seems to be a small number that can't keep up with the parade. No stimulant seems to get any spizz into them."

"There's one good thing about it," Reilly asserted, "and that is when we win this war the dealers we have left will be birds." Tommy nodded agreement.

"Yes—that's true."

"This war is a terrible thing, Tommy, but it's going to give a few benefits to our country," Reilly continued. "It's putting every man,

every woman, every business and every enterprise to the acid test. Those that haven't got it in 'em won't last. Those who do last will be the best of the bunch. When we all get down to the finishing line some of us will be surprised at the ones who are not with us.

"In every line of business folks are going up and down. Two of our dealers, who have been called for military service, have grabbed their guns like men and will write the name of Callawassa and the Sennett car on the walls of Potsdam or give a good reason why.

"Most of the others are on the up-grade and are going to get by, but some of them are surely slipping and I guess they're destined to slide off the map entirely. I have often wondered if the time would come when the fit and the unfit in business would be separated, and then along comes this terrible war and proceeds to do the job we had all been talking about for a decade.

"The weeding out began two or three years ago. Some of our big mercantile establishments that were not on the right basis toppled and fell, and other enterprises have gone, too. Some lines of trade have been practically wiped out because there really was little or nothing left for them to do, and then there are other lines of business such as ours where the hand of war has fallen hard but where it is still possible for people to get by if they have real business in them.

"In this trade there are numerous ways a man can turn. He can revamp his business along certain lines, he can get on a war basis and steer his craft through the troubled waters—if he will. And right there comes the test that is going to show who's who and what's what in this industry.

"We will have dealers, such as Madden and Dukes, who will not make any effort to be thoughtful business men. They won't wake up to the seriousness of the situation until they are so deeply in the hole that they have to close their doors. Then they'll say the war put them out of business and that they patriotically closed their doors. At the same time they and their employees will go to the bank and cancel the obligations on the Liberty Bonds they're paying for and will help throw a wrench into the gears of our nation's war machinery.

"Madden and Dukes always were backward and below par. I can remember the time when I tried to get them to clean up their places of business and run real stores. They made a half-hearted effort, but it didn't last more than a couple of days. They were soon right

back in the old rut again and nothing we could do would get them out.

"I remember the day a party of tourists, who looked like about \$20 worth of business, stopped in front of Madden's place and began to look like a dinner-stop with a few repairs, some gas and a lot of other things. The women sought for rest facilities, but what Madden had weren't fit for a dog—and are not to-day. The whole gang ran on to the next town and Madden lost a fine bit of business.

"We tried to get him to sell accessories, but the inside of his head was so hard our advice went in one ear and right out again. It couldn't even get through to go out the other. We worked and tried hard to help him make some money and were unsuccessful, and if there had been another dealer

there I'm sure I would have dropped Madden long ago.

"He never kept books. He used his show window for a stockroom. His office looks like a junk shop. I'm ashamed of him as a dealer. I would never have forced him out of the running if I could have helped it, but now that he's bound to go I can't say that I'm very sorry."

"Madden was with us a long time," suggested Tommy.

"Yes," Reilly meditated, "he was with us a long time. He began some years ago. He began when our own Callawassa business wasn't so very big and he has been with us as we have grown. It has always been my ideal to build a big and paying business for myself here in this section of the state and it has been my ambition to take all my dealers along with me and to make them all prosperous and successful.

"I have done this with most of them and they will practically all pull through because they are good merchandisers and know that a clean shirt and collar on the boss of the place are worth more in a business way than hours of labor in greasy overalls under a car in the shop. They'll pull through because they have become live men. Some of them even came from the mechanic stage to the merchandiser stage. They are to-day a credit to the industry. They are top-notchers. They think. They plan. They work. They succeed.

"But we never could get Madden to think a single new thought. We couldn't seem to get him coming at all. He hung back. He stayed in the same old rut. He never planned, and all the work he did was in the shop. Nobody ran the business.

"The war is weeding out the ineffectuals. And the period immediately after the war will weed out a lot more. This is the period in the industry to which we shall some day look back and call the beginning of the era of merchandising, because the non-merchandisers and non-thinkers are going to pass away and only the fit will survive.

"There is time yet for Madden to survive if he would only do some of these things that we all know are necessary for getting by. But he won't.

"It's hard lines, Tommy. But the world is moving fast. The Madden type would have gone in time. All that has happened is that the world has been shot ahead by ten to a hundred years and we're getting 1950 history in 1918. I hate to see Madden go—because he's likeable personally—but he's of no value to the business world and the business world is weeding him out."

### *A Reilly Story to Be Kept and Re-read Many Times*

# The Passing of the Unfit

By Ray W. Sherman

# More Truck Sales Pointers

## 46—PAYING PROPOSITION ON FARM

Properly used the investment in a truck can be made a paying proposition for the farmer at his idle times. He can use the truck by doing work for his neighbor. He can haul wood to market and at places like this this one thing alone can be made a big item. Many farmers are now using their trucks to gather corn and to haul their cotton from their fields. Of course they have to use much care in this work or else they will get stuck in the soft dirt. He can do his work so much quicker than his neighbor that he can then haul his neighbor's produce to market.

The average up-to-date farmer around the cities where the roads are good is learning that his truck is of more benefit to him than the car. In other words, the farmer is being educated, and he must be educated more in order that the sale of trucks to the farmer will not deteriorate but that it will increase. Education is all important and the points to be stressed most is proper lubrication of the machine.—Texas.

## 47—NO WORK—NO EATS

If a man talks about probable idleness of truck part of winter, remind him that it doesn't eat when it isn't working, like horses, and doesn't have to have a man to take care of it every day the way horses do.—S. R. Truck Co., Denver, Bethlehem.

## 48—"CAN" THE POOR DRIVERS

Keep an eye on the drivers of the trucks you have sold. Help to make them efficient and proud of their trucks and they will advertise you. If they are inefficient and will not become efficient get them fired.—W. E. Rehbein, Garford branch, St. Louis.

## 49—PRICE ADVANCE ARGUMENT

Although a man wants his truck to earn money all the time, he saves up-keep expenses when it rests occasionally in a slack season, and right now the depreciation is likely to be less than the price advance by spring.—Colorado Motor Co., Denver.

## 50—SHOWS ABILITY IN SNOW

The winter season in Milwaukee and vicinity furnishes innumerable opportunities for truck dealers to help out truck owners in keeping their traffic on the move through monumental drifts, either by furnishing a "booster" truck or taking the load entirely as a matter of demonstration. The Kissel Kar Co., Milwaukee, has paved the way for numerous new sales in this manner.

## 51—SELL FUTURE "SHORT"

Tell your prospect in winter that he may not be able to get a truck when he wants it in the spring.—Secretary L. A. Rothgerber, S. R. Truck Co., Denver, Bethlehem.

## 52—FIND "WINTER PROSPECTS"

We always ascertain if the prospect will operate on roads which are kept open in the winter. Experience shows city users are the most logical purchasers in the winter. We prepare trucks with suitable bodies for coal and grocery deliveries and work upon prospects who are in these lines.—C. P. Cary, manager Garford Motor Truck Co., Boston.

## 53—CUSTOMER ADVERTISED TRUCK

The Norton-Buick Co., Denver, won many friends by getting one of its G. M. C. customers to move a lot of 30-in. cast-iron pipe, totalling two miles long, for the Denver Union Water Co. One piece alone weighed 9600 lb.

## 54—KNOW THE RIGHT MOVE

When we approach a prospect we know just what his service requires and that our line will meet all demands. Tell him our story simply and convincingly. We do not bore him. We know when to stop. It is a big mistake to sell a truck that is inconsistent with the service. It is a very common fault.—Hartford Motor Car Co., Atterbury, Hartford, Conn.

## 55—TALK COLD WEATHER EFFICIENCY

Point out the handicaps of horse-drawn equipment. Show that loads must be lightened because of heavy going and poor footing, thereby diminishing the tonnage per day and proving horse-drawn equipment inadequate to keep up the delivery schedule. No matter what the traveling may be or how cold the weather, trucks keep going with full load practically all the time.

Show loss with horse-drawn equipment by reason of injury to horses falling on icy pavements and prove loss from such sources during bad weather by reason of horses breaking legs, making replacements necessary to keep up requisite number to make deliveries. It is a well known fact the winter weather develops a multitude of injuries in a stable, which makes it necessary to make replacements from time to time or in keeping up delivery schedule a larger number of horses than required because of the fact horses have to be rested one day out of two or three in order to be in any kind of condition to do work.

Show that better protection for drivers on truck increases the driver's efficiency in severe weather. The fact also that they finish their work earlier in the day and have no stable work to do attracts a better class of men for driving trucks, and this in itself is a great help to solve the delivery problem.—George H. Hudson, manager Boston branch General Vehicle and Walker trucks.

## 56—TEACH COMMON SENSE

Impress upon prospect that a little scratch in the paint will not lessen the pulling power of a truck. Load coal into

a new truck and demonstrate if necessary.—S-R Truck Co., Denver, Bethlehem.

## 57—BE A WAREHOUSE ENGINEER

J. O. Warner, Indiana truck, Kansas City, offers this device, which he has adapted successfully on several occasions making sales: The prospect has short hauls from a warehouse. Bodies are built with small flanged wheels. A track is laid through the warehouse—with switches if necessary—and a swinging platform, with rails, by which the body can be rolled from warehouse floor to truck. The body can be wheeled through the warehouse and loaded and then run onto the truck.

## 58—SELL 'EM RIGHT

The John H. Ryan Motor Truck Co., Milwaukee, never sells a truck unless it has first satisfied itself that the capacity is suited to the purchaser's requirements. This means a lot of extra effort and what some might call a waste of time, but when that man is in the market for another truck he shows his appreciation in a substantial manner.

## 59—ADMIT YOU HAVE COMPETITORS

Trucks are more necessary to-day than ever. Many business houses do not know the truck story fully. We have to tell it to them. We do it in as few words as possible. We explain the situation fully and sell only those who can use our line to advantage. We do not try to make a prospect think we have the only truck built, but we do know what ours will do and tell him.—The Britton Co., Federal, Hartford, Conn.

## 60—IS TEACHING FARMERS

One successful truck dealer is spending all his spare time in educating the farmer in the use of the truck. While he has been a truck salesman for only a few years he has taken his place among famous salesmen. Recently he sold eleven Wichita trucks to the Hick Stevenson Lumber Co. of Arkansas, and he sold the trucks over ten competitors. This is how he did it:

He took two of the eleven trucks and in thirty-six hours delivered 35,000 ft. of lumber over the mountains and through the valleys of Arkansas, a distance of from eight to ten miles to the load at an expense of \$62.50. It required two teams and wagons to remove the same amount of lumber just two weeks at an expense of \$180, or nearly three times as much.

"The farmer," he concluded, "can have a similar saving if properly educated by the dealers. That is just what we must do if there is to be an increased use of the truck."

## 61—SHOW PARTS STOCK

H. G. Dustman, service manager, Indiana Truck Co., Kansas City, urges truck dealers to stock parts so as to have evidence to show prospects that fear war conditions will hamper maintenance of trucks in service.



**62—PLAYS "ROADSIDE HELPER"**

William P. Tyler, Pierce truck sales manager for Tom Botterill, Denver, keeps watch for disabled trucks along streets and roads, and wins friends by offering to supply a truck to complete the haul.

**63—SELLS FORDS IN WINTER**

Winter is just as good a time, if not better, than any other for the sale of the light Ford. When the big boys get stuck in the snow and little Fords ramble right along we get hold of backward prospects and invite them out to make comparisons. We don't urge a man who needs a 5-ton truck to buy a 1-ton Ford, and we caution all buyers that overloading is bad business. We insist on our salesmen sticking to the truth and not promising the whole earth. We carry a complete stock of parts, which is the biggest asset we know of.—Elmer Automobile Co., Ford, Hartford, Conn.

**64—KEEP GOING IF YOU CAN**

H. G. Dustman, service manager Indiana Truck Co., Kansas City, urges dealers and garagemen to maintain their stocks and keep their business going strong to the last minute, even if they have to go into war service, and to leave their businesses in charge of a woman, if necessary, when they do go. "You can't lose any more that way than by closing—and there will be something for you to come back to, or for your family to have," he said.

**65—FIFTY-FIFTY WORK**

The Alfred Reeke Co., 495 Broadway, Milwaukee, distributor of and dealer in the Nash truck, helps its customers to keep accurate records of performance, and the customer reciprocates by lending the records to the dealer for clinching other sales by black-and-white argument.

**66—FOSTERED A CAB BUSINESS**

Walter P. Busche, salesman for G. T. O'Maley, Ford dealer, Kansas City, assumed that two Jewish prospects would be friends rather than hostile competitors—he sold both of them taxicabs, got them together—and they have stimulated each other to effort until both now have half a dozen cabs in service.

**67—THIS IS ENTERPRISE**

The Swenson Auto Co., Denver, found a man using a horse-drawn tank-wagon for contract hauling of city water to a community of farmers. The sales manager made a study of road conditions, grades, etc., equipped a Republic truck with special gear ratio and special length frame, proved to the man that the truck would haul three days' water supply in one day and leave the next two days for other useful work. He bought the truck.

**68—HAULED CHRISTMAS TREES**

W. W. Barnett, Denver, Federal and Stewart distributor, gained valuable advertising in winter by hauling Christmas trees from mountains for public program.

**69—GET ACQUAINTED WITH THE HORSES**

J. O. Warner, district sales manager at Kansas City for Indiana trucks, suggests that in winter truck salesmen can profitably spend time investigating the barns of prospective purchasers, discovering what the keep of idle horses is costing, and having data therefore against which the prospect cannot raise objection.

**70—BE FRIENDS WITH TIRE MEN**

Truck tire salesmen may well be cultivated by motor truck salesmen for information concerning new truck sales. The tire man has access to information which is not available to the truck man for obvious reasons. J. W. Kelly, who travels in Wisconsin for the Sterling Motor Truck Co., manufacturer of the Sterling truck, has made numerous sales on tips received through this source.

**71—WINTER USE ON FARMS**

The Denver-Sandow Truck Co. urges farmers to buy trucks for winter use in order to hold products for higher prices and then haul them to market in much less time than with horses.

**72—KEEP TRACK OF TRUCKS SOLD**

William Groneweg, Indiana Truck Co. at Kansas City, suggests that truck dealers and salesmen should carefully keep track of all trucks they have sold to see that if stored they have been properly oiled and are put into condition for use when needed—perhaps incidentally stimulating the owner to get the truck out and use it.

**73—THOSE ICY STREETS AND ROADS**

My special argument for winter truck buying is the slipping and sliding of horses. Colorado roads are usually solid in winter, but snow and frequent thawing and freezing spells often make them very icy.—Pierce salesman for Tom Botterill, Denver.

**74—REMEMBER "REMOVABLE BODIES"**

J. O. Warner, district sales manager for the Indiana Truck Co., Kansas City, suggests that when trying to sell a prospect whose hauls are short, as one hauling between warehouses and terminals, the subject be opened with description of use of two or more removable bodies.

**75—PERFORMANCE BIG SALES FACTOR**

The Thomas Furnace Co., pig iron manufacturer, ran two Pierce-Arrow trucks 22 hours daily for eight months, making a total of 35,000 miles on each truck. Another make could not keep up to this pace and has since been replaced by a Pierce-Arrow, making three 5-ton jobs sold to one concern by the American Automobile Co., 187 Wisconsin Street, Milwaukee, in less than 9 months' time.

**76—DON'T DEMONSTRATE—GUARANTEE**

Don't demonstrate. Find out exactly what work will be required, and then contract to fill the bill.—H. H. Heiser Co., Denver, Velie and Rainier.

**77—WATCH THE ICY HILLS**

W. W. Barnett, Denver, Federal and Stewart distributor, plans to pull coal wagons up icy hills this winter when horses are slipping about and scarcely able to make the grade.

**78—SHOW HOW TO READJUST OPERATION**

J. O. Warner, district sales manager of the Indiana Truck Co., Kansas City, advises truck salesmen to figure out ways that a prospect can readjust his operations to use a truck rather than trying to show how a truck will fit into the prospect's present routine.

**79—KEEP CLOSE TO EXPRESSMEN**

An unlimited number of tips on truck prospects may be derived from operators of motor transportation lines which are now being established in large numbers in various parts of the country.

**Penlings from the Pen of Dike**

A feller never put on a tire by cussin but he sure eased his mind.

Man made coco cola and he made it mighty nice. He made it powerful popular. Cause he advertised the price.

A clean garage looks as good to a tourist as the first born baby does to the daddy.

Jist because a tourist calls at your garage is no sign he likes you but if you treat him the same as you do your pet customer he will sure like you and will send others.

Fill a storage battery with a smile on your face. Don't act like you wished the feller had never lived.

If you keep your customers tires up with the right amount of air all the time

you won't have to use hot air to get the business.

"We hain't got it" and "can't get it" sound just about the same to a customer as telling him to go to (cut by the censor.)

Make a nice rest room for the ladies around your garage and the men will come to spend their money while the women come to spend their time.

Advertise in your home papers and do it every day and you will always have the money for your bills to pay.

Do your work right so that you can look every customer in the face when he pays you.—C. H. Wooden (Dike), Lamar Motor Sales Co., Lamar, Colo.

These lines continually are being offered hauls and haulage contracts by concerns which have sufficient traffic to support trucks of their own, and generally are merely waiting to be sold. The motor line is glad to give the truck dealer from whom it purchases its trucks information of this character to relieve its own position. This is an experience of Upham-Schacht, Inc., 415-417 Marshall Street, Milwaukee distributor and dealer in the Diamond T.

#### 80—LIFT UP THE LITTLE TRUCK OWNER

The manager of a Kansas City branch that distributes a large, high-priced truck, habitually shows and encourages friendliness toward the owners of small trucks and truck attachments. He has therefore avoided rubbing anybody's fur the wrong way; has helped the small-truck owners into circles where big-truck talk is heard, and so helped them to become better prospects for big trucks—and better credit risks.

#### 81—A HEISER SALES POINT

H. H. Heiser Co., Denver, points to 4-ton Velie with special body built to prevent overloading used daily by ice company 18 months with a record of 18,000 miles at less than \$50 for repairs.

#### 82—SOLD FOUR TO A COUNTY

The Miller-Ray Motor Co., Denver, used a 3½-ton Kissel to pull a road grader in heavy sod alongside country road when road gang could not pull it on road with eight horses. The county commissioners bought four trucks.

#### 83—THE DEPRECIATION ARGUMENT

I show winter prospects where price advances will more than cover depreciation, even if truck not used steadily every day.—John F. Mauro, Republic sales manager for Swenson Auto Co., Denver.

#### 84—"RENT YOUR TRUCK"

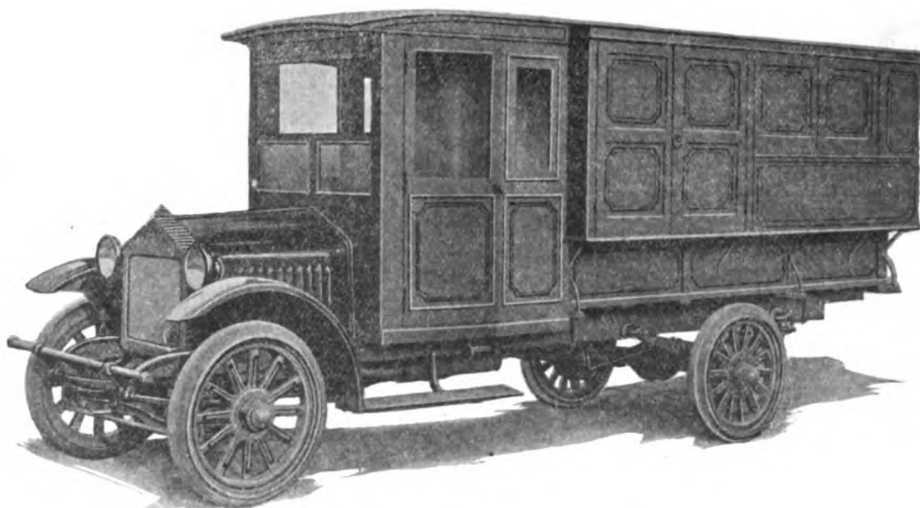
If a winter prospect claims business is liable to be slack, tell him to hire out his truck for contract hauling and thus get more rapid returns on his investment, perform a war service and prevent his truck from being idle.—Ross C. Brown, vice-president of Denver Sandow Truck Co.

#### 85—STUDY ALL THE ROADS

Make a first-hand, thorough study of road conditions and haulage requirements in every section of your territory, and then furnish each dealer the exact equipment for his community. I have just finished a three months' investigation of this kind, covering every county in Colorado.—John F. Mauro, Republic sales manager for Swenson Auto Co., Denver.

#### 86—INSIST ON GOOD DRIVERS

Insist that your customers employ good drivers, keep trucks carefully oiled and report any trouble immediately.—H. H. Heiser Co., Denver, Velie and Rainier.



*John T. Wiersena of Muskegon, Mich., a wholesale itinerant merchant selling to general stores and other retail merchants of Northern Michigan—and who for 20 years supplied that trade by traveling through the country in a horse-drawn vehicle, carrying his stock in a large tarpaulin covered wagon—has doubled business by employing a Panhard motor truck. He now makes trips in six weeks which formerly took him twelve weeks. He is on the road most of the year but finds already that his business has doubled in volume and that it is necessary for him to carry larger stocks than he ever carried. One reason for the doubling of volume is in the faster speed that he now makes between towns. Formerly with a horse-drawn wagon where towns were 15 miles apart it took him three to four hours on the road, which he now makes in a single hour and is able to call on every merchant in the town, whereas he skimmed the cream before. The Wiersena truck is a veritable warehouse, for the truck carries his entire stock and when he takes an order for merchandise he delivers the merchandise on the spot. It formerly cost him \$16 a week—not counting horse depreciation, as it is known that the working life of a horse is but three years and a motor truck more than twice that length of time—to operate his horse-drawn vehicle, and his truck costs him \$9 to \$10 a week to operate, not counting the decreased depreciation.*

## How Not to Sell Trucks

#### 1—DON'TS FOR TRUCK MEN

Do not criticise any other truck.

Do not talk too much.

Give a prospect a chance to figure out his own problems; then go over them with him without trying to magnify his faulty ones. He may get sore.

Do not give him the impression he is spending money; but rather going to get a larger return on his investment from trucks than horses.

Do not expect passenger car salesmen to sell trucks readily, for few of them can do it.—W. J. Connell, Connell & McKone, Boston, Overland, Bethlehem and Atterbury.

#### 2—DON'T TRADE—GET CASH

R. E. Atkinson, with C. G. Rowan-Diamond T Truck Co., Kansas City, does not assume that a prospect who already has a truck will want to turn this truck in on a trade. More than half his sales to men owning trucks are on cash basis.

#### 3—DON'T GIVE FREE DEMONSTRATIONS

The motor car salesman tackling a truck sale is likely to make the mistake of thinking a work demonstration neces-

sary. Usually the demonstration seeker wants free hauling. Get his respect by offering a demonstration at a high wage. Sell him on accurate transportation figures and show him a truck doing similar work elsewhere.—W. E. Rehbein, Garford branch, St. Louis.

#### 4—NEVER SELL FOR OVERLOAD USE

Never sell a truck for overload use.—Pierce salesman for Tom Botterill, Denver.

#### 5—DON'T GET WRONG VIEWPOINT

Don't make the mistake of supposing that a man who spends \$3,000 for a motor car will be readier to spend \$2,000 for a truck that will make him money. Most business men look longer at the dollars that go into their business than at those that are spent partly for the benefit of their families.

#### 6—DON'T MAKE TOO EASY TERMS

Keep the terms of your sales out of the ditch. There is too much of a tendency to sell without a down payment, on

the argument that "earnings will pay for the truck." This is folly. Sell for cash if this can possibly be done. In no case sell at less than one-third down, balance twelve months at 8 per cent, secured by return mortgage. If a customer can't meet these terms, he isn't worth selling.—Carl Changstrom, president, Standard Motor Car Co., Omaha.

#### 7—DON'T BE TOO GENERAL

J. O. Warner, district sales manager, Indiana Truck Co., advises against making general claims for the efficiency of trucks as replacing horses. A truck may replace four horses on long hauls, but will replace only one team on short—and there are plenty of arguments for replacing the single team.

#### DON'T BE OVER-MECHANICAL

The way NOT to sell trucks is to talk too much about mechanical features and not enough about delivering goods. Be too technical and not sufficiently well acquainted with your customer's delivery problems. Fail to study the problem of transportation and to understand about probable delays at terminals and delivery points. In other words, if you cannot talk to a man in terms he can understand and talk about the requirements of his particular business, you are quite likely to fail to interest him.—George H. Hudson, manager General Vehicle and Walker trucks, Boston.

#### 8—LACK OF DETAILS HURTS

Ignorance of mechanical details of the truck he is selling will get a salesman into hot water, even with prospects who themselves don't know all about trucks.—H. M. Casson, G. G. Hamilton Motor Truck Co., Kansas City.

#### 9—DON'T SELL WRONG SIZE

Avoid selling your customer a truck which he must adapt to his needs. The truck salesman sells fundamentally only a chassis. Learn precisely the use for which the truck is needed. Sell nothing else to that customer. If you sell him a 2-ton truck for 1-ton loads, or vice-versa, you've made an enemy.—Albert W. Sydney, assistant manager, Omaha branch, Studebaker Corp. of America, Omaha.

#### 10—NEVER RUFFLE A PROSPECT

"The biggest blunder a truck salesman can make is to tread on the toes of a prospect by knocking his pet truck," said R. E. Atkinson of the C. G. Rowan-Diamond T Truck Co., Kansas City. He has sold trucks to prospects whom competitors have ruffled by such a blunder.

#### 11—DON'T EXAGGERATE

Mistakes dealers and salesmen make is to invite the prospect to trade some old car. to make exaggerated claims of which they have no knowledge and that can never be fulfilled. Above all things

not to misinform the prospective purchaser concerning the truck they are trying to sell. The things passenger car salesmen are likely to stumble over trying to sell trucks is their inability to interest the man from the truck point of view. They must talk what the truck will earn and the best size and type of body for the business in order to interest him.—C. P. Cary, manager, Garford Motor Truck Co., Boston.

#### 12—DON'T GO HALF PRIMED

Some truck salesmen don't go to the trouble of getting full information on truck operation, and so fail to win the confidence of prospects.—R. E. Atkinson, of the C. G. Rowan-Diamond T Truck Co., Kansas City.

#### 13—DON'T OVER-TALK

Don't over-talk. Get prospect to asking questions about the truck as suited to his particular purposes.—Miller-Ray Motor Co., Denver, Kissel.

#### 14—DON'T BE LOW-PRICED-GOODS MAN

Passenger car salesmen who have handled low-priced cars very seldom make good truck salesmen, for they have not mixed with men of means, those who buy trucks. So they are handicapped. They have been selling an article which calls for an expenditure of money. Trucks are an investment to save a man money so it calls for a very different line of talk. And until the passenger car salesman has studied and mastered this fact he is not going to be a success with commercial vehicles.—A. H. Sowers, Fulton truck and Cleveland tractor, Boston.

#### 15—CAN'T BLANKET THE WORLD

A set of figures on operating costs prepared for one prospect won't do for another; summer figures won't do for winter. Each case must be studied.—R. E. Atkinson, C. G. Rowan-Diamond T Truck Co., Kansas City.

#### 16—DON'T SELL "LOOKS"

Don't sell paint, fine looks, etc., on trucks, but sell construction for work and the idea of a money-making investment.—Norton-Buick Co., Denver, G. M. C.

#### 17—DON'T BE EASY MARK

Demonstrations are usually a mistake. Often the man asking it wants some cheap transportation.—W. E. Rhebein, Garford branch, St. Louis.

#### 18—DON'T SELL FOOLISHLY

Don't sell a truck just to make a sale. Be sure to get a truck to fit the exact work required.—Harrison Motor Car Co., Denver, Autocar.

#### 19—FORGET THAT SPEED THING

"I didn't buy ——— trucks, because the salesman was always trying to tell me how much speed my drivers could make," said a Kansas City transfer man. "I have enough trouble keeping my drivers to maintain a reasonable speed and not wear out the equipment too fast."

#### 20—DON'T SELL TRUCK ONLY

It is a mistake to try to sell a truck as a truck. Sell transportation, with the machine the necessary evil attending it.—W. E. Rhebein, Garford branch, St. Louis.

#### 21—DON'T TAKE ADVANTAGE OF PROSPECT

Don't sell a truck in the winter or any other time unless you are sure it will make money for your customer. Having to take trucks back is poor business all around.—Sales manager F. W. Miller, White Motor Co., Denver.

#### 22—DON'T "BID" FOR USED TRUCKS

The biggest mistake a man ever made is to bid for a used truck as part payment.—C. E. Lightfoot, G. M. C. branch, St. Louis.

#### 23—DON'T PREACH CARELESSNESS

Don't tell a customer that his truck won't need oiling or looking over only once a week. Advise him to give it daily care the same as he would a good horse.—White Motor Co., Denver.

#### 24—DON'T LET WINTER SCARE YOU

The motor car dealer who takes on trucks and quits for the winter is making a huge mistake. The farmer who thinks a whole lot of his horses is most likely to buy then.—Milton Koenig, Weber Improvement & Auto Co., St. Louis.

#### 25—DON'T CUT PRICES

Don't give any customer any discount. If you do, he'll wonder how much more he ought to have got.—S-R Truck Co., Denver, Bethlehem.

#### 26—DON'T KNOCK—THEY'RE ALL GOOD

Don't knock another truck. All trucks are good trucks.—S-R Truck Co., Denver, Bethlehem.

#### 27—SELL THE RIGHT TRUCK

Don't oversell or undersell. Find exact requirements, and then sell truck or right tonnage to meet them.—Norton-Buick Co., Denver, G. M. C.

#### 28—DON'T BE A DUDE

Don't go out to sell trucks with silk hat and cane. Be prepared to get into overalls and jumper and show the prospective customer all about the working parts of the truck.—S-R Truck Co., Denver, Bethlehem.

# Use Newspaper Space to Help Get By During The Coming Winter

## CLEMENS WILL DISTRIBUTE CLEVELAND TRACTORS IN LARGE IOWA TERRITORY

Contract Calls for Over \$1,000,000 Worth of Tractors

We are ready to make contracts with dealers in the following counties in Iowa.

Adams	Greene	Ringgold
Adair	Guthrie	Story
Appanoose	Jasper	Taylor
Boone	Lucas	Union
Carroll	Madison	Wapello
Clarke	Marion	Warren
Dallas	Monroe	Wayne
Davis	Polk	
Decatur	Poweshiek	

Those who know and who have seen the "Cleveland" in operation know that it is an unqualified success.

Without any previous announcement we are getting agency inquiries by mail, by telephone and personal calls. Don't wait until tomorrow if you want your territory.

The "Cleveland" tractor is of the caterpillar type. It carries and lays its own track, like the giant tanks and the small "Whippet" tanks that are making history on the western battle front. It is small and comparatively light, travels as fast as is consistent, and keeps right at it, thereby doing a maximum of work.

We can make immediate delivery of both tractors and plows. Get yours while that condition exists. One of our dealers sold six tractors at retail last week.



The Cleveland Tractor

It answers the farmer's demand for help.

It makes possible greater production in spite of labor shortage.

It takes the places of both man and beast.

It doesn't eat when it isn't working.

It needs no rest.

It works faster and better.

It means more crops at lower cost.

It makes money and saves money.

It doesn't eat a big per cent of the crop.

**Dealers:**—Come and see about your territory now. Automobile dealers must turn to the tractor to fill in the vacancy made by shortage of automobiles. Your territory may be closed tomorrow. If you can't come in write or use your telephone.

## CLEMENS AUTOMOBILE COMPANY

Phone Walnut 884 and 885

DES MOINES, IOWA



**THE TRACTOR**  
That Does the Things You Want a Tractor to do

Therefore  
Farmers are producing larger crops  
because of the Cleveland.  
Farmers are making greater profits  
because of the Cleveland.  
Farmers are doing more to win the  
war because of the Cleveland.

Farmers are buying Cleavelands every week at  
Byram Acres, Strattonville, Pa.,  
because it is the tractor that does the things  
they want a tractor to do.

Save Your Time

Winter Is Coming  
Mr. Car Dealer

RESERVE YOUR SPACE NOW  
FOR WINTER STORAGE  
Before the Rush for Space Begins

Your cars will be safe and in a warm  
place this winter in our large store room.

**Buy Your Winter  
Auto Supplies NOW!**

Prices Are Bound to Go Higher, So  
Don't Delay

**MOTOR HERE TODAY FOR**

FOOT WARMERS  
HOOD COVERS  
RADIATOR COVERS  
ETC.

**Welton Motor Car Co.**  
205 State Street Phone Badger 320  
MADISON, WISCONSIN

## Notice To Autoists

Owing to the uncertainty in the output  
of Buick Automobiles this fall we are  
anticipating a greater floor space for  
the storage of cars.

Heretofore we have used our  
large storage room for New  
Buick Automobiles, and have  
only used a small floor-space  
for the storage of transit cars.

If you are going to store your car this  
winter see us early about floor space as  
we will be rushed for space later on.

**Hokenson-Buick  
Company**  
16-20 East Doty Street  
Phone Badger 1127-1128

## Farmer Boy has arrived in Illinois, Michigan & Wisconsin

We have at last secured the tractor we have  
sought—a product we can back with our rep-  
utation, our unbounded confidence and the  
enthusiasm of our entire organization.

**Simple  
Sturdy  
Versatile  
Economical  
Moderate Price**



For some time we have been on a still hunt for a light standardized farm tractor. We would not accept the representations of any tractor which would not justify 100 per cent recommendation from us. The Farmer Boy is such a tractor. It exactly embodies our ideal of what a light farm tractor should be. Our Tractor experts say—"It's the pick of the tractor field." We believe it is the tractor best adapted for the farms of Illinois, Michigan and Wisconsin. We know that in selling the FARMER BOY TRACTOR we are selling TRACTOR SATISFACTION.

The Farmer Boy is the modern type. Cables wheel, engine, ball wheel and load are in a straight line—the type advanced by the best tractor engineers. Simple in construction, easy to understand, simple and guide-line—boy can run it.

Its few parts are easy of access—no differentials, no universal-joints, power at drive bar and

pulley and plenty of power without waste of power for emergencies.

Power and performance plus are characteristic of the Farmer Boy Tractor. It is built for continuous performance.

Excellent Farmer Boy features have broadened the field of tractor usefulness. The Farmer Boy handles all farm work requiring pulling

power or pulley power.

It pulls a new crop, including corn ready to "lay by" as well as it plows, prepares the seed bed and harvests.

It is an all-around tractor, delivering its service with ease and economy.

It is built to work—in a good factory—by a good organization.

We shall take great pride in demonstrating the merits of the Farmer Boy Tractor to you. Come in and look this tractor over—it will please you.

**Mitchell Automobile Co.** Distributors of Farmer Boy Tractors  
for Illinois, Michigan and Wisconsin  
2334 MICHIGAN AVENUE, CHICAGO, ILLINOIS  
528 Broadway, Milwaukee, Wis.

## The Shortage of Man Power

will in the near future increase the cost of Material and Labor.

NOW is the time to have your automobile taken care of.

All makes of passenger cars and trucks rebuilt and repaired

Our complete Machine Shop and efficient workmen combined with the other departments of our organization will bring to you our Motto.

**"YOU FIRST MUST BE SATISFIED"**

Make reservation NOW for Winter Storage.

**Overland-Madison Company**

## MAKE A WINTER CAR

Out of Your Touring Car or Roadster

As a very reasonable price for a car you "didn't want" you can have a car that will make it a very reasonable investment for the winter. The car does not have to be new. It can be old.

**Write Us for Estimate or Bring Your Car in for Prices**

**PROMPT WORK**

We will do your work in the shortest possible time.

**THE THOM AUTOMOBILE CO.**

CHICAGO, ILL.

The ads on these pages are from all sections, picked up at random. They show how the new automotive dealers are putting the tractor and other products across by the use of newspaper space and how the advantages of winter overhauling are brought to the attention of motorists generally. In economizing this winter don't cut off your wise expenditures — of which advertising is one

# What a World It Would Be If Ruled By Such As These?

*The Pictures on These Pages Show Various Types of German Prisoners Captured on the Western Front. They Look Very Intelligent, Do They Not? Yes They Do—NOT. So—Over with the Fourth Loan and Clean 'em Out*

*These pictures are copyrighted and issued by various bureaus and news services. The big picture at the top is from the Feature Photo Service. The one of the thirsty man and the gentleman with the tin hat and hoot-owl goggles are British Official pictures by the Feature Photo Service*







*You can use a trailer as does the Western Electric in Kansas City*

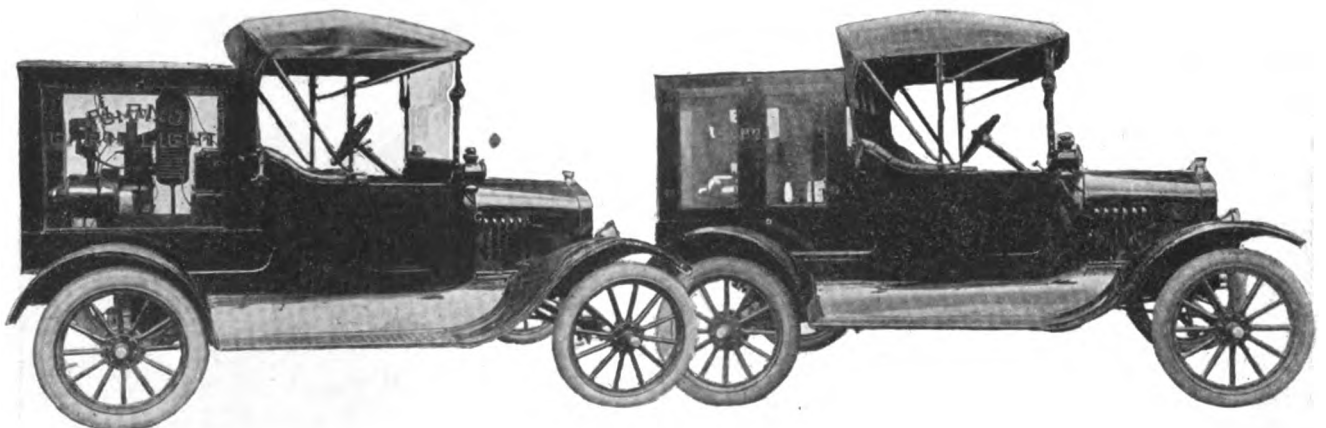
## Ways of Showing Farm Light to the Farmer



*Or you can put it in a box like this on the back of a car*



*Or you can fix it up inside a delivery body as is done in several different parts of the country*



*Or you can build a glass case like this and have it permanently fixed or removable from the body. But whatever you do, fix up some sort of conveyance so you can carry the thing out to the farm and demonstrate it in the farmyard*

## The Magic Lamp

# The Unit Light and Power Plant

**GET IN NOW—BE A LEADER AND CASH IN ON YOUR LEADERSHIP**

**You Should Sell Unit Electric Plants, Because—**

- 1—They bring added profits at a time when you need them.
- 2—They furnish an extra leg for your automotive business.
- 3—They keep you in touch with the farmers who buy your cars, trucks and other automotive products

### How to Go at It

1. List all the well-to-do farmers in your territory in List No. 1.

2. List all the less likely-to-buy farmers in List No. 2.

3. Mount a plant on a trailer or the back end of a car. Equip it with flat-irons, heaters, toasters and other accessories and plenty of lead.

4. When ready to campaign, use newspaper advertising of whatever size you feel is suitable and you can afford, running this consistently and not in one first-and-last splurge.

5. Send out a letter something like this:

#### Sales Letter No. 1

*Would you be interested in something that would save labor for you and make it possible to do more work with fewer men?*

*Would you like to have the electric lights of the city in your home?*

*Anyway—in a few days you will get by mail a book telling about the Blank light and power plant for farm use. Look the book over carefully in order that you may ask any questions that are in your mind when we call later at your home.*

6. A few days later send the book.

7. A few days later send this letter:

#### Sales Letter No. 2

*The book you received a few days ago about the Blank electric system tells quite a lot about it, but no book can describe light.*

*No words could tell a blind man what the sun is like—because he had not seen*

*it. And no words can tell you what the Blank light would look like in your home—because you haven't seen it.*

*It may sound strange to you that we can cart this system around the country, but we can because it's small. We want to drive into your yard some day and show it to you. We are coming down your way in a few days and, if any particular time pleases you, we wish you would drop us a line or phone 7777.*

8. Then drive out to the farm some day, run the lead into the house, hang a cluster of lights on the chandelier, picture molding or some other place, and let them shine while you tell the farmer all about what the lights can do for him.

9. At the same time demonstrate some of the accessories for the benefit of the wife. Heat the iron, toast some bread and turn on the heater.

10. After a system is sold you can arrange the installation with some electrical contractor. You should get in touch with him before you start to sell, unless you are going to do your own installing.

11. After the system is installed drop around once a month and demonstrate an

accessory. If you leave a vacuum cleaner with the wife for a few days she will have a difficult job letting you take it away. Often she'll buy.

12. Plant your sales in different sections so each system will sell others.

13. Attend grange meetings and light the house for the occasion, but don't try to sell while at the meeting.

14. Have a separate salesroom for the sale of these plants and their accessories. Don't put them in with the cars. Too much spoils a sales chance for all the products. If your salesroom is big, cut off one side with a partition and use that. Put a display in the window and have all sorts of accessories there to demonstrate when folks come in. The Alamo man in Omaha has an oil painting of a farmyard with transparencies for windows, etc., and he lights this up from behind and shows an electrified farm.

15. Don't let all your organization scatter on this work. Have one man who specializes on it. Later you may be able to let other men work it, but at the start you should put one man in charge and let him become a specialist. Then he can train others.

## 61 Selling Ideas

### 1—A GOOD CHRISTMAS TIP

Every demonstration plant should be in use next Christmas every night where there is an entertainment and tree. Buy the colored lights for the tree and light up the whole place. But do not try to advertise or sell then. Be inconspicuous,

but get names of all present.—R. J. Williams, Lalley-Brockman Lighting Co., St. Louis.

### 2—ALL KINDS OF STORES

The druggist in the small country town is an excellent prospect for farm

light and power plants. He must keep his electric fans going for the ice-cream and soda trade. Other small stores, schools and even churches are fast taking to the idea in such communities. Village homes are not so fruitful a field.—Fred L. Tubbs, vice-president, Alamo Farm Light Co., Omaha.

### 3—KNOW THE WHOLE FAMILY

As in automobile selling—it's well to know something of every member of the family who will have a word to say in the buying, or the use of the purchase.

### 4—MAKE FARMERS ASK QUESTIONS

Let your sales ideas serve the farmer through making practical suggestions and winning his desire to co-operate. Get him to make suggestions and ask questions, too.—Lalley-Western Electric Co., Denver.

### 5—GO SEE A NEIGHBOR

If roads are too bad to take out the demonstrator, farmers will be especially responsive to an invitation to go with you in your automobile to visit a neighbor who has a light plant. They'll be tired sitting at home, and it is your motor car that will have to be cleaned.

### 6—DEMONSTRATES IN SERVICE STATION

Grant Haley, Grant City, Mo., maintains a small service station, where there is a Delco-Light plant for demonstrating; he added lamps and supplies for the convenience of his Delco-Light customers—and is selling such supplies also to town users of electricity.

### 7—ARE YOU REALLY READY?

The new light plant dealer who does not know how many farms are in his county, how many are owned by occupants and how many homes are owned in lightless villages, how many isolated workshops and how many churches, school houses and grange halls is not ready to begin to sell.—R. J. Williams, Lalley-Brockman Lighting Co., St. Louis.

### 8—CIRCULARIZE PERSISTENTLY

Every prospective customer of the Lalley-Western Electric Co., Denver, gets two letters, two postcards and six circulars at intervals of ten days.

### 9—LIGHTS A WHOLE VILLAGE

The town of Modale, Iowa, with a population of about 500, is lighted entirely by two Lalley-Light plants, one on each side of the main street.—James L. Flynn, sales manager, Lalley-Wilson Electric Co., Omaha.

### 10—SOME DEAL!

Grant Haley, Grant City, Mo., garage-man, sold 35 Delco-Light plants in a year in Worth county, the smallest county in Missouri—then sold his garage, and then got the purchaser to take on Delco-Light

sales also, so that there would be two people boosting these sales instead of only one.

### 11—WATCH THAT "FREE SERVICE"

R. E. Parsons, Delco-Light, Kansas City, warns against the gift of labor and supplies to light plant users under the guise of "service."

### 12—MODERNIZE THE FARM

Aim to modernize a man's farm—not just to get his money.—Lalley-Western Electric Co., Denver.

### 13—MAKE SURE OF SATISFACTION

"Every Delco-Light plant sold sells three others—if the salesman or dealer gives service on it," said R. E. Parsons, Delco-Light distributor at Kansas City. "Service means seeing that the purchaser is getting the best use out of his plant."

### 14—THEY SELL ANYWHERE

We have installed light plants in three-room log houses in southeast Missouri.—R. J. Williams, Lalley-Brockman Lighting Co., St. Louis.

### 15—EXHIBIT EVERYWHERE!

State and county fairs, any gatherings where a salesman can meet farmers, should have exhibits and demonstrations of farm-lighting plants—they are the best possible means of getting the names of prospects.—R. E. Parsons, Delco-Light, Kansas City.

### 16—NEVER TALK COMPETITION

I confine myself to what our plant will do and never talk competition.—Vice-president W. J. Haughey, Lalley-Western Electric Co., Denver.

### 17—ECONOMY OF HOME-MADE "JUICE"

In Wisconsin, where a wealth of water power makes electricity cheap—for the producer—a network of transmission lines is being constructed into many rural communities. These offer the farm-lighting plant salesmen a gigantic obstacle at first. Clever figuring generally makes it possible to convince the farmer that he can make an individual plant pay for itself in a couple of years. Comparisons between owning and renting a home or farm also have been found very effective to illustrate the economy of a farm-lighting plant, against purchased current.

### 18—CREATE A DEMAND

Everybody desires a motor car, but only a small per cent of people WANT a lighting system. You must create a demand.—Vice-president W. J. Haughey, Lalley-Western Electric Co., Denver.

### 19—THE MORE WINTRY THE BETTER

"The fall is the time to sell light plants, when people are thinking of lighting their homes," said R. E. Parsons,

Delco-Light distributor at Kansas City. "Prospects who have seen a plant operating ought to be easier to sell the longer into the winter they have to endure other means of lighting."

### 20—THESE ARE PROSPECTS

Every farmer who owns a farm, every church, some school houses, some farm tenant houses and dairy barns, if detached from the farm houses, are prospects.—R. J. Williams, Lalley-Brockman Lighting Co., St. Louis.

### 21—CHARGE CAR BATTERIES

"Many of our dealers are building good business charging automobile batteries with their demonstrating plants," said R. E. Parsons, Delco-Light distributor at Kansas City.

### 22—LET THE PLANT TALK

By all means get to show what your plant will do, and let it do most of its own talking.—M. J. O'Fallon Supply Co., Denver.

### 23—CHART THE LABOR SAVING

Make up a chart like this to show the farmer's wife just what the earning power of the farm-light system is in the farm home alone, without counting the work outside:

Chores	Times per Week	Time Consumed Each Job	Hours per Week	Per Hour	Total per Week
Churning	3	1 1/2 hr.	4 1/2	20c.	\$3.30
Washing	1	10 hr.	16 1/2	20c.	2.00
Care of lamps	6	1/2 hr.	3	20c.	.60
Separator work	14	15 min.	3 1/2	20c.	.70
Sweeping	2	2 hr.	4	20c.	.80
					\$4.40

She'll make her husband do the rest.—James A. Flynn, sales manager, Lalley-Wilson Electric Co., Omaha.

### 24—GET TESTIMONIAL LETTERS

Delco-Light dealers claim, conservatively, that a plant will save an hour a day of labor; one dealer carries around a letter from a user, saying that his plant and equipment saved him \$1,200 in two years in labor released by the plant for other work. He makes his conservative claim, then shows the letter.

### 25—500 PROSPECTS AT STATE FAIR

R. E. Parsons, Kansas City distributor of Delco-Light, has 500 names of Missouri state fair visitors who asked for further information, after seeing the plant at the company's exhibit at the fair. These names will be sent to dealers in the districts where the inquirers live.

### 26—RAH FOR THE TOWN BAILIFF!

The town bailiff usually runs the one or two plants sold for small-town lighting—no engineer is necessary. The town bailiff is a valuable publicity agent!

### 27—CLASSIFIES SALES ARGUMENTS

The Lalley-Western Electric Co., Den-

ver, furnishes its salesmen classified arguments according to whether a customer will buy from pride or some other motive.

## 28—FOR STREET LIGHTING

Many Delco-Light dealers are selling the larger plants to towns of 500 population and up, for domestic and street lighting. Almost invariably a second and third unit are later sold, as the population learns to use electricity, and demands on the original plant are increased.

## 29—SELL WHEN CROPS SELL

Watch when the farmers are marketing their crops. Then hit them hard with the farm-light proposition. They are getting higher prices than ever for their produce this year, and are now marketing the corn.—Fred L. Tubbs, vice-president, Alamo Farm Light Co., Omaha.

## 30—NEVER MIND THE LOOKS

The Jonas-Lalley Light Co., Milwaukee, tells its salesmen that they must not neglect a farmhouse just because it may look as if it were 100 years old. Many a weather-beaten exterior covers a well-to-do farmer who is just looking for someone to come along and sell him.

## 31—PUSH ELECTRICAL ACCESSORIES

Runge Bros., Concordia, Mo., motor car dealers with a profitable accessory store, are now also selling Delco-Light, and pushing electrical accessories. This motor firm stood second in the entire Kansas City district of Delco-Light in August, in the sale of accessories.

## 32—START WITH THE RIGHT GOODS

Anybody who thinks of selling lighting systems ought to investigate fully the companies that manufacture them.—Manager Earle H. Frazier, Barnett Ranch Lighting & Appliance Co., Denver.

## 33—MAKE DEALERS WORK

Impress the fact on your dealers that taking the agency for a farm-light plant is only the barest start in this business. Ford taught the whole trade how to sell automobiles. He went into the field himself AND WORKED! No fine front on your store will do the business for you if you sit around in the windows and smoke. You've got to hit the tall grass.—Fred L. Tubbs, vice-president, Alamo Farm Light Co., Omaha.

## 34—SHOW A WORKING MODEL

The best kind of demonstration plant for a dealer is one actually at work in his own place of business.—Fairbanks, Morse & Co., Denver branch.

## 35—SELL ELECTRIC COMFORT DEVICES

No farm-lighting plant demonstration outfit is complete unless it contains a liberal supply of electrical devices and appliances for the home, says the Briscoe Co. of Wisconsin, Milwaukee, represent-

ing the Alamo. The women of the house, who really are the court of last resort on the question of purchasing, deserve the utmost consideration and attention.

## 36—LEARN THE SYSTEM THOROUGHLY

Ed and Lewis Runge, of Runge Bros., Concordia, Mo., motor car and accessory dealers, decided to enter the farm-light plant business. They spent three days of hard work at the Kansas City district headquarters of Delco-Light—and knew what they were going to try to sell before they started.

## 37—TALK EFFICIENCY

Efficiency is the watchword in selling farm-light systems. These are war-times. The Government has called for greater food production with less manpower. The farmer must therefore put his occupation on a more efficient basis. Labor-saving machinery is typified in farm-light and power systems.—James A. Flynn, sales manager, Lalley-Wilson Electric Co., Omaha.

## 38—CHECKS AGAINST ERRORS

The Denver branch of Fairbanks, Morse & Co. checks up carefully all specifications on every order, to guard against any mistake from enthusiasm or carelessness of salesmen and to make sure that plant will fill requirements fully.

## 39—WATCH YOUR FOLLOW-UP

Watch your follow-up calls. Keep a card index of every prospect. Leave at the end of each call so that you can return if necessary. Record what he says. Be able to answer. Three or four calls should land the most obdurate prospect.—Fred L. Tubbs, vice-president, Alamo Farm Light Co., Omaha.

## 40—MORE MONEY THAN SELLING CARS

Somebody from Runge Bros., Concordia, Mo., is out in the country every day in the year except Sundays—and some Sundays—selling Delco-Light plants and accessories. The company is making more money now than it used to from motor cars; and it has some ideas on selling cars and accessories that it will put into effect later.

## 41—TALK APPLIANCES

Talk appliances, and then show how your plant can handle those appliances at low cost.—M. J. O'Fallon Supply Co., Denver, Alamo.

## 42—ADVERTISE PLENTIFULLY

Farmers in your territory are taking the farm papers in which the big factory advertisements of farm-light systems appear. It's up to the local dealer to announce himself promptly and forcefully. If he doesn't his competitor will sell his prospects "something just as good." Don't neglect the advertising.—James A. Flynn, sales manager, Lalley-Wilson Electric Co., Omaha.

## 43—BELIEVE IN YOUR SYSTEM

If you don't feel that the lighting system business is the business you want to be in the rest of your life, stay out, and you will save yourself time and money.—Manager Earle H. Frazier, Barnett Ranch Lighting & Appliance Co., Denver, Delco.

## 44—SELL ONLY WHERE NEEDED

Don't sell a lighting system because you need the commission. If a customer doesn't need a plant, don't sell him one.—Barnett Ranch Lighting & Appliance Co., Denver.

## 45—CHECK YOURSELF UP

Check yourself up! Have you a good sign on your place of business? Is your demonstrating plant right up in front and properly working? Are you using any advertising? Do you talk enough or too much? One is as bad as the other.—James A. Flynn, sales manager, Lalley-Wilson Electric Co., Omaha.

## 46—HUNDREDS OF PROSPECTS

The Lalley-Western Electric Co., Denver, sells to farms, country homes, small hotels, stores, banks, etc., and considers every farm worth \$10,000 a good prospect.

## 47—STRONG PERSONAL CANVASS

Nowhere is personal canvass more effective than in selling farm-light systems. Load your plant on a truck. Go to the country with wire enough to reach from the truck into a house or barn. Demonstrate. Give the kids buttered toast from your electric toaster. Shove an electric globe into the hay mow. Hammer hard on fire protection and insurance.—Fred L. Tubbs, vice-president, Alamo Farm Light Co., Omaha.

## 48—AVOID TOO HEAVY WORK

Never sell a plant for work too heavy for it.—M. J. O'Fallon Supply Co., Denver, Alamo.

## 49—DON'T RUN A DUMP

A dealer the other day asked me why he hadn't sold more than one farm-light plant in six months. I looked over his place. He had no sign in front. His plant was at the rear of the building. I had to move two boxes, a barrel and three oil cases to get at it. I found it dirty, the batteries run down and the gasoline tanks empty. I wondered how he sold the one.—James A. Flynn, sales manager, Lalley-Wilson Electric Co., Omaha.

## 50—WEDDINGS AND PARTIES

Never overlook an opportunity to light a home for a golden wedding or other social affair, but never try to sell them. Get your lights going and come as near hiding as possible, answering only direct questions. But get a list of all present.—R. J. Williams, Lalley-Brockman Lighting Co., St. Louis.

**51—STICK TO FACTS**

You don't have to overstate the merits of a good lighting system. Stick to facts.—Barnett Ranch Lighting & Appliance Co., Denver, Delco.

**52—INVESTIGATE FARM FIRST**

Always find out if a farmer already has a gas engine, and then show him how that engine can run a light plant while doing the grinding and other work he has been having it do.—Fairbanks, Morse & Co., Denver branch.

**53—TIME AND LABOR-SAVING THE THING**

Elaborate far more on time-saving and labor-saving devices, especially for household work, than upon lights.—Lalley Western Electric Co., Denver.

**54—LITTLE MOTOR TALK**

The only motor talk we make is that the perfect balance of our motor insures long life, and also does not require a foundation.—M. J. O'Fallon Supply Co., Denver, Alamo.

**55—KNOW COMPETING LINES**

The more I know about other makes of plants the more confidence I have in the one I am selling.—Earle H. Frazier, manager Barnett Ranch Lighting & Appliance Co., Denver.

**56—TELL THE TRUTH**

I always tell a prospective customer exactly what my lighting system will do, and never anything it will not do.—C. H. Parker, Denver, Genco.

**57—GET READY FIRST**

The Lalley-Western Electric Co., Denver, outlines a complete campaign in advance and then sends out a salesman armed with an entire sales plan for whatever class of plant conditions demand.

**58—DON'T BE TOO "PUBLIC"**

Never try to sell a lighting plant to a farmer with anyone present besides the family. Most farmers are mighty secretive about their affairs.—R. J. Williams, Lalley-Brockman Lighting Co., St. Louis.

**59—DON'T WAIT FOR PROSPECTS**

A dealer who had done little business, and wondered why, asked me about it. I inquired how much he had worked. He said he "talked Lalley lights whenever a prospect came into his place of business, and that he had made at least six or eight trips to the country in several months past." Nothing on earth can be sold that way. People do not buy pianos, phonographs, automobiles, insurance or light plants as they do sugar and coffee. **YOU HAVE TO GO OUT AFTER THEM!**—James L. Flynn, sales manager, Lalley-Wilson Electric Co., Omaha.

**60—DON'T DO THE "RUSH ACT"**

Don't try to crowd the deal when the prospect has never thought of farm lights until you approached him. Give the idea time to soak in. The "rush act"

is the poorest kind of business—and the least successful. When your prospect fully comprehends what farm-light and power systems are, then is the time to jam on the pressure.—Fred L. Tubbs, vice-president, Alamo Farm Light Co., Omaha.

**61—DON'T MOUNT ON WEAK TRUCK**

Never mount your demonstrator on a light truck until you have tested the springs. Most springs need strengthening as the plant is heavier than it looks.—R. J. Williams, Lalley-Brockman Lighting Co., St. Louis.

## Can You Get Coal?

If You Can't You Will Be Interested in This Report on the Coal Problem by the New Jersey Automobile Trade Association of Newark, N. J., Which States as Follows:

### Latest Information About the Coal Situation from N. J. Automobile Trade Association

In view of the fact that Dr. Garfield, National Fuel Administrator, has issued positive orders to N. J. State Fuel Administrator R. C. Jenkinson, to the effect that automobile salesrooms, garages and service stations were not to be permitted to receive domestic sizes of anthracite coal; that nothing coarser than No. 2 buckwheat might be had, although permission was granted to burn bituminous coal, Administrator Jenkinson last week appointed a committee composed of H. A. Bonnell, chairman, J. W. Mason and W. H. Ellis to make an investigation of the fuel situation, with the idea of determining what might be done toward providing relief for the men engaged in the automobile business who expect to keep their plants heated this winter.

An investigation was made of the oil situation, and it is the belief of the committee that, while kerosene oil may be procured in quantities, its cost would be prohibitive.

The use of fuel oil is out of the question, for the reason that the Government is taking all fuel oil that is produced.

After a careful investigation of the entire situation, the committee has recommended that:

1—Coke be used.

2—Have grates changed where necessary so that No. 2 Buckwheat anthracite coal can be used.

3—Bituminous coal be used.

Coke can be procured in sufficient quantities to supply the demands of the automobile salesrooms and garages throughout the State. In view of the fact that it can be obtained in sizes similar to those in which anthracite coal is sold, it will not be necessary to change the grates. Cities in the Middle West, like Detroit, Milwaukee, Minneapolis and St. Louis, have been using coke for domestic purposes, and in small industrial plants for a number of years with satisfactory results. The only item to be watched in burning coke is to keep a little deeper fire than is customary with anthracite coal and to keep the drafts checked somewhat more.

If it is desired to change the grates, very good results may be obtained from burning No. 2 Buckwheat, but it is the committee's belief that on account of the present condition of the steel situation, as well as the fact that foundries are loaded up with work, it might be very difficult to procure new grates or to get them installed before cold weather sets in.

Plenty of bituminous coal may be procured at this time, but the fire is more difficult to handle, and requires almost constant attention.



# If You'll Do It This Way

## *Vision and Imagination Can Be Crystallized Into Profits*

**R.** J. WILLIAMS of the Lalley-Brockman Farm Light Co. had been talking for some time on the general topic of "What Is a Prospect?" when he said: "As a matter of fact, every man who owns a farm is a prospect. We have lighting plants in three-room log houses in southeast Missouri. So is every church, some school houses, every grange hall. But that list is too long to tell all of it here.

"But I want to say this: Every lighting plant dealer should make himself into a promoter of the topics and movements of the day. He should be a leader in his community. And the topic of school houses and grange halls reminds me of one venture for him.

"The best people of the country have for several years realized that too much of the capital in public buildings is wasted. They see that the community that has a school house, idle every night and Sundays is wasting money. More money is wasted in grange halls that are idle most of the time. The same with the ordinary run of churches. The buildings themselves would be better for being used.

### School Houses are Prospects

"So it has come to pass that the granges are beginning to meet in the school houses. That makes the school house a prospect for a lighting plant. The lighting dealer can make himself a public leader and a benefactor by helping this along.

"Also he can help to organize a lyceum or debating society in the neighborhood, to meet in the school house, or a dancing club to meet in the school house or the grange hall that already is erected. These organizations make light prospects of these otherwise non-prospect buildings.

### Political Prospects

"There constantly are movements of this kind going on in a county and the lighting dealer who gets behind them calls the organization meeting and helps the young people along will not only help his business but he is likely to elect himself to Congress or the legislature or something.

"He must remember that in his business he is a public benefactor and it is his obligation to himself and to his customers to urge as many lights and as much comfort to his friends and neighbors as possible.

"From the beginning of history the greatest benefactors have had to force



R. J. Williams

themselves upon the public, and the lighting plant owner is no exception. Even though he light up his own salesroom or his garage or both and he lets that light shine, not many people are going to come in and say 'Come out to my house and dispel the darkness.'

### Dealer Is a Missionary

"That is not the way people do. For years the school houses stood at the corner and then the states had to pass compulsory educational laws. The lighting dealer is a missionary for health, comfort and happiness and like all of his kind, he has got to force his message on the people. There is more good selling argument for the lighting plant in the Bible than any other book.

*What Do You  
Consider the  
Best Idea in  
This Issue for  
Getting By This  
Winter ?*

"But in organizing these movements and clubs and supplying light for public entertainments, large social gatherings, etc., the dealer must **KEEP HIS MOUTH SHUT OR—AT MOST—SPEAK ONLY WHEN SPOKEN TO.**

"People will ask a lot of questions at these places and these should be answered as briefly as good taste will permit. Mr. Dealer should be as retiring as his light will permit him to be. There should be no dark corners, but there will be a shadow that he can get into. The public hates a man who mixes business and pleasure. He can, though, quietly get the names of all present for later use. But when posing as a missionary or as an aid in dispensing pleasure, he should be a missionary or a pleasure giver and that alone.

### Keep Young Folks on Farm

"Of course, the big idea behind all of this is the movement on to keep the young folk on the farm. It is the lights, the excitement and the comforts of the town home that draw them. The lighting dealer is the one big factor in taking those comforts to the young folk on the farm and keeping them there by making the town look tame beside the farm.

"There is made here in St. Louis a portable picture machine that will run with the power supplied by a Lalley plant. I told one of our dealers the other day that I would consider him a failure if he did not place one of these machines in every rural school in his county. He is the kind of a man that can do it and I expect him to set the pace. It shows mighty good moving pictures, all things considered, and it is in use in hundreds of city schools for educational purposes.

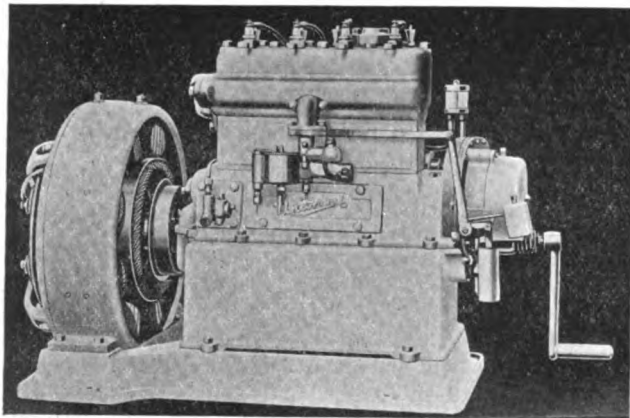
### Of Real Educational Value

"In the country this will be just as useful for the school children, in fact more so, for the rural school children have not access to public museums, they do not see big buildings in construction, nor can they go to big workshops.

"But of evenings this machine can be used to give regular picture shows and in the cities the schools that buy them usually pay for them by giving entertainments.

"When this dealer places one of these machines in every school district, he will be the greatest benefactor to the children of that county on their local records.

"I think we are signing up a lot of men who are going to do some of these things and once they put one of them across, there will be no stopping them."

**UNIVERSAL**

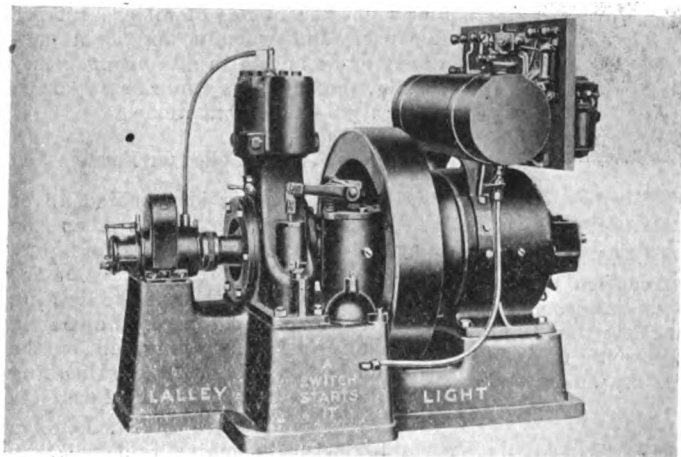
Universal Motor Co., Oshkosh, Wis.

Lamp Capacity—250 15-watt  
lamps  
Battery—Optional  
Engine—8 hp.

Fuel—Gasoline or kerosene  
Engine Starting—Crank  
Generator—4 kw.  
Switchboard—Detached

## A Dozen Representative Electric Light and Power Plants

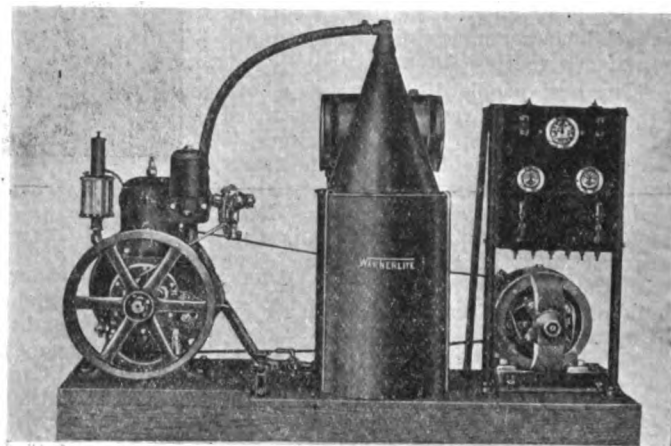
**I**NDIVIDUAL electric light plants are proving a great success for the automotive dealer. Look these over and get acquainted. Other dealers are selling them and making money. The field is large and the prospects number hundreds of thousands.

**LALLEY-LIGHT**

Lalley Electro-Lighting Corp., Detroit

Light Capacity—87 15-watt  
lamps  
Battery—Willard  
Engine—1½ hp.  
Fuel—Gasoline

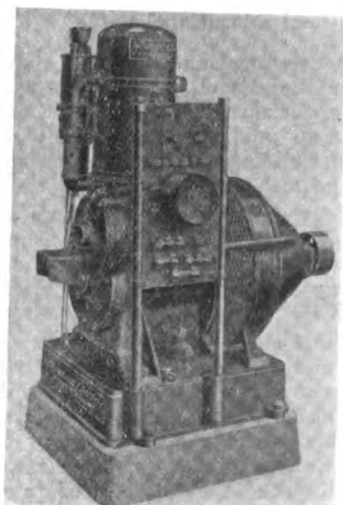
Engine Starting—Automatic  
Generator—1 kw.  
Switchboard—Attached  
Price \$475 complete

**WARNERLITE**

Warnerlite Co., Davenport, Ia.

Light Capacity—80-120 15-watt  
Battery—Warnerlite  
Engine—4 hp.  
Fuel—Gasoline or kerosene

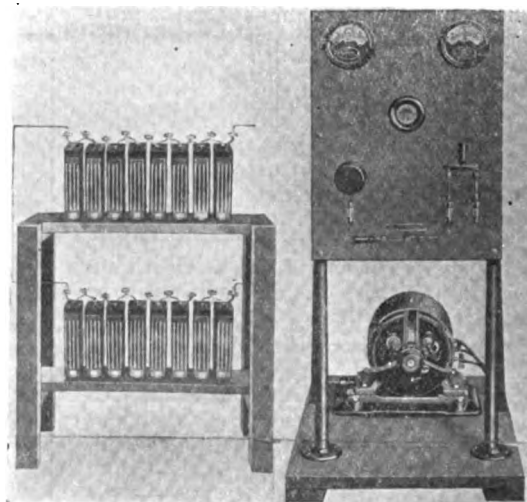
Engine Starting—Automatic  
Generator—1 kw.  
Switchboard—Optional  
Price—\$498 complete

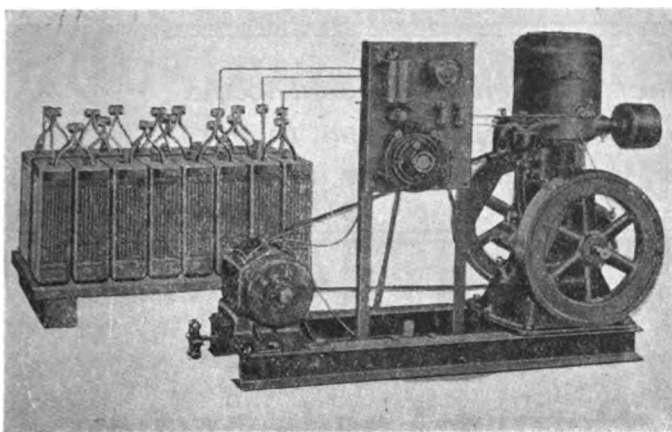

**WESTERN ELECTRIC (Left)**  
Western Electric Co., Inc., New York City

Lamp Capacity—75-150 15-watt lamps  
Battery—Western Electric  
Engine—3¼ hp.  
Fuel—Kerosene  
Engine Starting—Automatic  
Generator—½-1 kw.  
Switchboard—Attached

**GRAELECTRIC (Right)**  
Gray Motor Co., Detroit

Light Capacity—60 15-watt lamps  
Battery—Globe  
Engine—3 hp.  
Fuel—Gasoline or kerosene  
Engine Starting—Automatic  
Generator—¾ kw.  
Switchboard—Detached  
Price—\$290 without engine

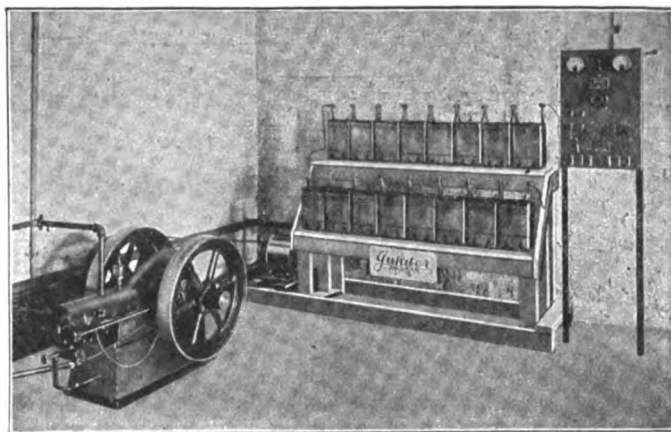


**DYNETO**

Dyneto Electric Corp., Syracuse, N. Y.

Light Capacity—60-120 15-watt lamps  
 Battery—Willard  
 Engine—1½-3 hp.  
 Fuel—Gasoline or kerosene

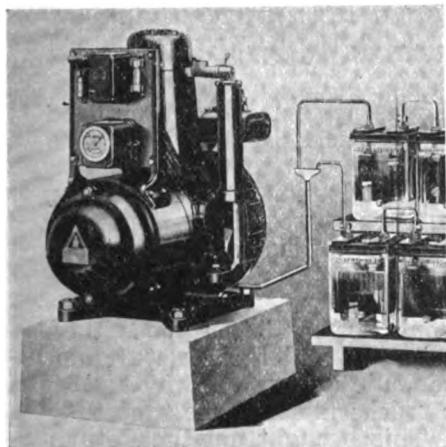
Engine Starting—Automatic  
 Generator—¼ kw.  
 Switchboard—Detached  
 Price—\$340-500 complete

**JUPITER**

Perfection Storage Battery Co., Chicago

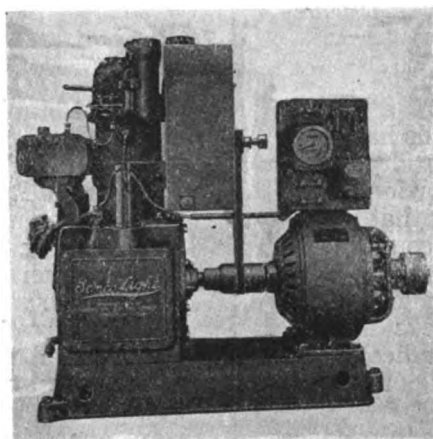
Lamp Capacity—50 15-watt lamps  
 Battery—Perfection  
 Engine—2 hp.  
 Fuel—Gasoline

Engine Starting—Optional  
 Generator—¼ kw.  
 Switchboard—Detached  
 Price—\$355 without engine

**DELCO-LIGHT**

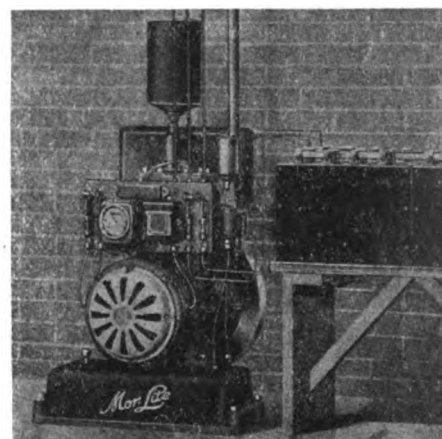
Domestic Engineering Co., Dayton, Ohio

Light Capacity—60 15-watt lamps  
 Battery—Delco  
 Engine—6 hp.  
 Fuel—Kerosene  
 Engine Starting—Automatic  
 Generator—¼ kw.  
 Switchboard—Attached  
 Price—\$425-495 depending on battery

**GENCO-LIGHT**

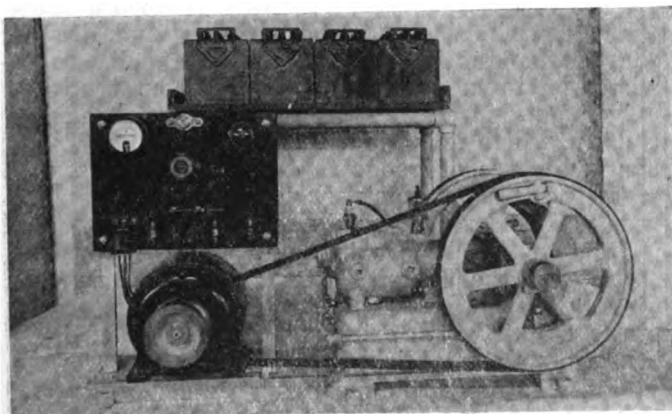
Light Capacity—47 15-watt lamps

Battery—Genco  
 Engine—2 hp.  
 Fuel—Gasoline, kerosene or alcohol  
 Engine Starting—Automatic  
 Generator—¼ kw.  
 Switchboard—Attached

**MOR-LITE**

Fairbanks, Morse &amp; Co., Chicago

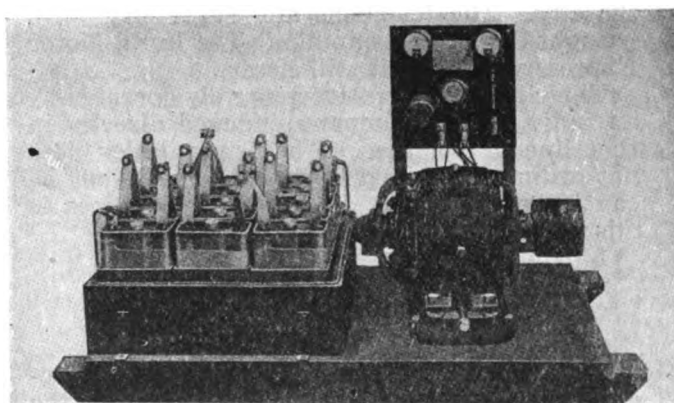
Lamp Capacity—50-200 15-watt lamps  
 Engine—3-6 hp.  
 Fuel—Kerosene  
 Engine Starting—Automatic  
 Switchboard—Detached

**KEWANEE**

Kewanee Private Utilities Co., Kewanee, Ill.

Lamp Capacity—90 15-watt lamps  
 Battery—Universal  
 Engine—2 hp.  
 Fuel—Gasoline

Engine Starting—Automatic  
 Generator—¼ kw.  
 Switchboard—Attached  
 Price—\$430 complete

**UNIVERSAL**

Universal Battery Co., Chicago

Light Capacity—45-85 15-watt lamps  
 Battery—Universal

Engine—1½-3 hp.  
 Engine Starting—Automatic  
 Switchboard—Attached

---

*There is a lot of time this winter that can well be devoted to the investigation of these two ideas and the selling of them, in part at least, to those whose help you will need when winter has gone*

---

## Get Behind the Rural Motor Express

*In the years to come the country is going to be filled with rural motor express lines. Some day folks will look back and wonder why we didn't have them before. And trade veterans will talk over the beginning of the great movement.*

THE Rural Motor Express is NOT a Return Loads System. The Return Loads has to do with trucks that run from city to city. The Rural Motor Express is a modernization of the old country stage line. It is a truck that makes a trip from the city out through the country and back, generally in the same day.

It carries city goods to the farmer, brings country goods to the city and picks up and drops freight along the way. It handles everything from talking machines and rugs to cream and calves.

Farmers in many sections hesitate to produce because they fear the produce cannot be marketed.

Large quantities of produce are lost because there is no way of getting it to market. Tomatoes rot on the vines and fruit on the trees because, while the farmer might have time to pick them, he hasn't time to market them.

The Rural Motor Express makes farm land more valuable because it brings it closer to the city. The telephone and rural mail have brought the city close to him. The Rural Motor Express will bring it still closer.

These express lines are generally operated by an individual or company engaged directly in that line of business. The truck dealer does not ordinarily engage in this business, but he can if he wants to. What the dealer does is this:

- 1—He investigates the layout of routes.
- 2—He runs a truck as a test.
- 3—He interests capital in the enterprise.
- 4—He sells trucks for this service.

The dealers who get into this movement to-day will be right there when it assumes the proportions it is certainly due to obtain. This winter there is time to investigate, talk, agitate and propagate among business men and farmers. Do a lot of preliminary work NOW so you can give the thing a big shove in the spring.

By so doing you are laying the foundations for a truck market that to-day hardly exists.

## Build Up the Return Loads System

*This is but one of the many means dealers can employ to give the truck business a big push and establish NOW, when the need is greater than in years, a system which will expand after the war and mean the sale of thousands of trucks.*

THE Return Loads system is an organized plan for operating trucks between cities with loads both ways.

Until the Return Loads plan came into being, trucks often made trips between cities, but were empty going or coming. This meant that the truck capacity was going to waste at a time when there was need for its use.

The railroads could not handle the goods, they are still in a bad way, and this waste truck capacity is an economic wrong. A way had to be found to keep trucks filled all the time they were operating. This brought out the Return Loads Bureau idea.

A Return Loads Bureau is a central headquarters, generally located at the Chamber of Commerce, the Motor Club, the Dealers' Association or some other headquarters that can provide desk room for it. In charge of it is an individual who devotes his whole time to it.

This bureau manager keeps a record of freight that is to be moved in various directions and keeps in close touch with local shippers.

If a truck reaches a bureau city and discharges freight it necessarily has capacity to whatever town it will hit next. The truck driver gets in touch with the Return Loads Bureau, which tells the driver that Smith & Co. has two cases of goods that will fit in. This gives the shipper quick service and prevents a waste of the truck capacity.

Lines of trucks are in operation in several sections of the United States. Lines are running daily from New York to Washington, stopping en route at all principal cities. The business is firmly established.

And what does this mean for the dealer? It means a big development of the truck idea. It puts actively operating trucks in highly efficient and original work before thousands of people every day. It sells the truck to the public.

Furthermore, it aids in the establishment of a new line of industry—and this new line is a big user of trucks.

# Industrial Tractor, Truck and Trailer

## May Be an Opportunity for YOU

### Look Into It

*IT is a motor vehicle run by electricity generally. The prime essential is that you become familiar with the electrical part of it. If you once understand the product there is every reason why you can make it a profitable addition to your automotive line.*

#### What Is An Electric Storage Battery Industrial Truck?

A four-wheeled vehicle, self-propelled by direct-drive electric motor which gets its current from storage batteries carried in body of the truck.

#### What Is An Electric Storage Battery Industrial Tractor?

A three or four-wheeled vehicle, self-propelled by a direct-drive electric motor which gets its current from storage batteries carried in body of tractor.

#### How Does the Truck Differ From the Tractor?

The truck is a load carrier.

The tractor carries no loads.

Both are locomotives designed to pull trains or trackless trucks.

The tractor's load-drawing power is superior to that of the truck.

#### What Are They Used For?

Transporting materials from point to point in industrial plants, warehouses, freight houses, docks, etc.

#### What Kinds of Industries Use Them?

Factories of all kinds, railways, steamship lines, warehouses, department stores, wholesale houses, automotive industries, lumber yards, express companies, paper mills, etc., etc.

#### What Are Their Principal Talking Points?

1. The daily operating cost of a truck or tractor is practically equivalent to the daily wage of a trucker.
2. **Speed:** A truck or tractor with a long train of trailers can move more rapidly than a man with a two-wheeled hand truck.
3. **Tonnage:** A tractor will frequently pull fifteen tons.
4. **Flexibility:** Trucks and tractors can pick up loads anywhere and deliver them anywhere. A belt conveyor can pick up loads at one spot and deliver them at one spot. One is flexible and the other invariable.
5. **Ease of handling:** Women are driving trucks and tractors in industrial and dock establishments of New York.

#### What Is the Market of the Tractor?

Prospects for the tractor are in all types of communities, from villages of a few hundreds up to the largest cities. The deciding factor, however, depends not so much upon the industry and its location as upon—

- 1.—The length of haul;
- 2.—The amount of trucking;
- 3.—The tonnage or quantity of material handled;
- 4.—Speed required in transferring material.

#### How Many Substantial Companies Are Making Industrial Trucks and Tractors?

Twenty-seven companies are making industrial trucks and tractors, and of these companies perhaps ten would receive the highest rating given to factories.

#### How Are Trucks and Tractors Sold?

There is no standardized method of selling. Each prospect's problem is unique, because no two plants are exactly alike. The present salesmen of industrial trucks and tractors proceed somewhat like this:

- 1.—Discover where the following four tractors exist in the plant of the prospect—  
A—Long hauls;  
B—Necessity for speedy transfer of materials;  
C—Large quantity of material to handle;  
D—Much trucking.
- 2.—If these factors are found, salesmen may seek to get interest of shop foremen, factory superintendent, master mechanic, or similar executive, and win him over to the idea of a demonstration. If the demonstration idea is O.K.'d, salesmen may drive into the plant with truck or tractor and work in competition with existing methods of transporting materials. Sometimes this demonstration is entirely at the expense of the tractor manufacturer; sometimes at the expense of the tractor distributor; sometimes at the expense of the prospect. Such demonstration may last three weeks.
- 3.—During this demonstration, a general transportation system, with the tractor or truck as its pivot, is laid out, records of saving kept, employees of the plant trained as drivers, general good-will developed among the plant employees, etc.
- 4.—In the case of the sale to a certain railroad, it was necessary for the salesman to win the good-will of every one, from the division superintendent clear down to the chief baggage man, and after O.K. for demonstration was secured, salesmen handled baggage and mail trucks on the station and the platform for three weeks running on a night shift. The superiority of the tractor in this instance was so clearly demonstrated that large sales resulted.



## *How to Get the Business*

# Make Your Shop Produce

It used to be said in the trade that the shop was a necessary evil, that the dealer had to have it but that it always ran at a loss. The same applied to the garageman—**BUT—**

**T**O-DAY the shop is one of the life preservers of the business, and "to-day" is one of the life preservers of the future. And why? Because the dealer is compelled by the events of to-day to make his shop pay, and after times again approach normal he will continue to make it pay—which is what he should always have done.

The shop is a life preserver for the dealer more than for the garageman, for the garageman's sources of income have not been cut as have those of the dealer in cars. But even the garageman has NOW a fine opportunity to make his shop yield a BETTER income.

1. As a first step, economize. Study the economies listed elsewhere in this issue of Motor World.

2. Study the story on how to make service pay.

### *Do This*

*A—Find out how many jobs a week you need to keep the shop going.*

*B—Lay out a schedule and place the orders you get on this schedule.*

*C—Get SIGNED orders.*

3. List the owners of all your cars in your territory.

4. List all the other cars.

5. Send out frequent letters.

6. Make personal calls.

7. Advertise in the newspapers.

8. Your sales arguments are: A—An overhaul now will make the car last longer. B—The sooner the work the smaller the bill. C—Avoid the spring rush. D—If the war lasts until spring there won't be any new cars, and you will want a new car. The best way is to make sure by having your old car made new.

9. The advantages to you are that you will get income NOW and will avoid the spring rush. But a big and not to be overlooked advantage is that the customers you get for winter work will come to you many times in the future IF YOUR WORK IS GOOD.

#### Repair Letter No. 1

*We hope the war will end before April 1, but—*

*The only safe way is to figure that it won't end for another year.*

*This means that we must figure that there won't be any new cars next summer.*

*But you'll want a new car next summer, and won't be able to get one.*

*The next best thing to do is to make your old car into a new one.*

*You have no idea how small an expenditure it will take to bring your car back to a youthful condition.*

*Furthermore, an inspection NOW may save you money later on, for attention to troubles when small prevents them from getting big—and costly.*

*We shall be pleased to look your car over for \$2.50 and give you our advice as to its condition.*

*Drive it in any day.*

#### *Three Repair Letters*

##### Repair Letter No. 3

*In days gone by it was the habit with us all to trade the old car in and get a new one.*

*Then somebody bought the old one, fixed it up and had just about as good a car as some new ones.*

*We never knew how much value was left in the cars we traded away.*

*This is a good year to find out—for the simple reason that new cars are scarce and high in price.*

*Here is our suggestion: Drive your car to our place of business, let us inspect it at a charge of \$2.50 and tell you what it will cost to make it so nearly like a new car that it will be hard to tell the difference.*

*Then you'll have a new car and it won't cost you much.*

*Drive in any time.*

##### Repair Letter No. 2

*In these days of conservation we all try to make a dollar go a long way.*

*When we buy shoes we want them to give us long wear. And when we buy clothes we like to have them last a reasonable time.*

*The same with your car. New cars are scarce anyway, and you want the old car to give you maximum value.*

*There is one sure way to do this, and that is to take proper care of the car.*

*This means that you should keep a careful eye on it and remedy every little trouble before it gets big. A doctor can do a lot of good in one call if he is called soon enough.*

*Let us inspect your car—at a cost of \$2.50—and find out what condition it is in. We'll show you what we find, and you can act according to your own judgment.*

*Drive in any time.*

# You Must Originate Prospects If You Would Succeed

**Y**OUR profits come from your customers.

The foundation of your business and any increase in business is your prospective customers.

This means that you must have a list of people who may, if you urge them, spend money in your place of business.

How are you to get this list?

It will not come to you. You must go after it.

This is where hundreds of dealers and garagemen fall down and show their lack of qualification in the field of business. Distributors of the new electric light plant for farm use have taken their agencies away from dealers in some cases because the dealers did not originate prospects. To get started the dealers needed prospects, but they didn't know how or more likely didn't try to get a prospect list.

To get a prospect list of any kind you first ask yourself: Who is likely to buy what I have to sell?

You set down the different classes of people who may buy your wares.

You then ask yourself: Where can I get a list of these people?

You then seek out the sources from which these names can be secured and compile a list. The list **MUST BE PLACED ON CARDS IN A FILE** else it is of little value.

For example: You ask yourself, Who will buy my farm light plant? You set down as the answer: Farmers on farms above a certain size, farmers who are prosperous regardless of the size of the farm, up-to-date farmers, farmers who have just had big crops, manufacturing plants big enough to generate their own light, country schools and churches and small villages.

You then ask: Where can I get lists of these people? The answer is found as follows: The farms of a certain size you can get from the county realty and tax records. Ask the county clerk.

The prosperous farmers you pick up from your own present knowledge and from a personal investigation, a trip through the country, a talk with bankers. The up-to-date farmers you get in much the same way.

The big crop raisers of the present year you get from the country and city newspapers, from a talk with the men in charge of the local market, etc.

The manufacturing plants you get by taking a list of plants in the city or telephone directory and selecting from it a picked list of those you think might buy electric plants. These plants, obviously,

## *A Few Suggestions on Getting Prospects*

For What	Who	Source
Used Cars	Owners of small and old cars Prosperous workers Prosperous workers Newly prosperous	License lists Union headquarters Payroll clerks Newspapers
Trucks	Truck owners Business houses Business houses Farmers of certain size Public corporations and city departments Expanding businesses	License lists Directories Truck drivers County records Directories Newspapers
Tractors	Farmers of certain size Prosperous farmers  Up-to-date farmers Big crop raisers Manufacturing plants	County records Own knowledge and inspection Other farmers Newspapers Directories and own knowledge
Electric Light Plants	Same list as for tractors Country schools and churches Villages	County records Own knowledge
Accessories	Car owners	License lists
Repairing	Car owners Customers Accident cases	License lists Own records Newspapers

will not be the big ones because the big ones have big electric plants, but many of the smaller ones are good prospects.

The country schools and churches with the names of the trustees you can get from the school and church records of the county.

The villages that are small, but big enough to use two or three plants, you should be able to select from your own knowledge.

When you get all this down on cards in classified lists you have a good beginning for your farm light business.

There may be other sources, which you will readily uncover once you begin to give serious thought to this matter of **ORIGINATING PROSPECTS**.

The same procedure applies to all the products you sell, and a few suggestions as to where to get prospects appear in the table given above.

# Use Winter Months to Teach Farmers Tractor Mechanics

---

*The benefits to the dealer are manifold—The expense is small—The work is fine winter sales campaigning—It will give spring business a start*

---

**T**HERE are many reasons why the farmers of the country must be instructed in tractor, truck and car mechanics. One of the big reasons is that the more the farmers know the less attention the dealer will have to pay to the tractors, trucks and cars he sells. Service costs will be decreased. Satisfaction will be increased.

Some farmers make good mechanics. They go at the work through instinct. Others never will be very good mechanics. But instruction can make them all better mechanics.

The dealer in tractors may find great advantage in opening a winter school in the mechanics and operation of tractors. Incidentally he may work in a bit about his truck, his car, his electric light system and any other thing he has to sell. This should, however, come later in the course.

The school is best if held in the dealer's place of business. The salesroom will do if there is no other place, although a second floor room is best if one is available.

## This Course Will:

1—Teach the mechanics of YOUR tractor to the farmers, and whenever they think tractors they will always compare all other makes with YOURS. Yours will become the standard by which they judge all other tractors.

2—This teaching will open sales possibilities. It will make the farmers familiar with YOUR tractor. They will feel more friendly to it and to you. They will be easier to sell when they are in the market.

3—The farmers will become better mechanics. They will make fewer calls upon you for small service which they themselves can give. They will not be calling you all the way out to the farm to pick the chaff out of an overheating radiator. They will not be sending for you to yank the lever that keeps the plows in hard ground. You will save money by this teaching.

4—They will be more satisfied users of your machines, because the machines will give greater satisfaction, and the reason for this will be, not that the machine is better but that the farmer knows how to run it.

The school should be held during those months that the farmer is least busy. Probably December, January and February would be best.

And, inasmuch as you don't want to burden him with night sessions, it probably would be best to have the classes Mondays, Wednesdays and Fridays, or Tuesdays and Thursdays. Don't plan so much he'll quit before you're through.

The hours should be about 7 to 9 or 7 to 8.30 p.m. The school should start as soon after supper as the farmer can get to town and should close early enough so he can get home and to bed at a reasonable hour.

Perhaps a special demonstration could be arranged for late Saturday afternoon once in a while. The farmer could then attend the class, eat in town and take in a theater, giving him a profitable holiday.

## Announcing the School

Send letters to all the farmers around and tell them you're going to hold a tractor school two or three evenings a week during the winter—no tuition—no obligation—no expense, except time—and no object in view except to make the farmers better acquainted with tractors generally and their operation.

Announce the opening meeting and ask all who wish to attend to show up at a certain hour at the designated place. State that boys of 15 or 16, women, girls, men, every one who is interested, can attend; the more the better.

State the same thing in newspaper ads.

You may or may not ask them to reply to the letter. Farmers are not very good letter writers. If they show up that will be answer enough. You might follow up the first letter by a second letter or by telephone calls the day of or before the school opens.

## Running the School

1. To start with, you need certain equipment, which includes:

- a. Blackboard, chalk and erasers.
- b. Pointer.
- c. Blueprints of what you are going to talk about.
- d. Catalogs enough for all students.
- e. A good gas engine book. If the students want them also take their

orders, but tell them they will use your catalogs more than the book.

f. A cut-out motor of moving device to show four-cycle operation. One of these latter may be bought from the U.P.C. Book Co., 241 West Thirty-ninth Street, New York.

g. If feasible, have a tractor on the classroom floor with numerous nuts loose and greased, so covers, etc., may readily be taken off.

2. The next need is a teacher. Probably you can fill this job best yourself. If not, select the man in your organization who seems to fit in best as a teacher of mechanics.

3. Have the teacher give a sample lecture before your own organization to see how he hits it off.

4. When the class assembles, have someone give a talk on what the tractor means to American agriculture, how tractors have developed, what their future is to be, and the importance to the farmer of knowing a lot about mechanics, for the farm of the future is going to be largely mechanical.

5. Then find out how much the class knows about automotive mechanics. Find how many can drive a car, how many can make adjustments, how many have intimate knowledge of motor mechanics and how many know little or nothing. State how the course will be divided, as follows:

6. Start off with an explanation of elementary mechanics, which means that advanced students can skip the first few classes if they want to. Begin by teaching carburation, cycles of operation, the clutch, gearset, drive, etc., and then the operation of different implements.

7. After explaining operations, tell of some of the adjustments and troubles. Give concrete demonstrations as far as possible. Show what and what not to do.

8. At the wind-up of the class give a party or dance, or some special occasion, to which all the farmers' families are invited. Have all your salesmen and members of your organization there with their eyes and ears open, but don't let them intrude business into the affair. Just remember names and faces and make mental notes of sales data.

# Make Mechanics and Salesmen

---

*You Never Had Enough Good Ones and You Never Will  
Until You Make Them Yourself—NOW Is a Time to Begin*

---

**A**LWAYS in this trade the cry has been for good mechanics and good salesmen. Dealers, garagemen, customers and every one else have lamented the fact that good material was scarce.

It always was—it always will be—until the trade goes into the business of training the kind of employees it wants. They are never going to wander in from the great unknown, train themselves and become world-beaters.

Furthermore, the dealer who doesn't begin NOW to specialize in creating for himself an organization is not going to be the leader in the future. He can't be a leader because those who train organizations will surpass him.

Who is going to make up this trained organization? Men and women, both. More women than heretofore will be used—and to the great benefit of the trade. If there were more women employed in automotive establishments to-day there would not be the lack of cleanliness and the inefficiency that marks thousands of garages and salesrooms. The influence of women will be wholesome.

The men who should be trained NOW are the young men under 18 years of age, and other young men under 21 and 22 in deferred military classifications. When a man gets much beyond 20 or 21 he speedily becomes an old dog and can't learn new tricks. Women can learn new tricks at greater ages than men. Their minds are nimbler.

Where shall we get these student workers? Advertise in the newspapers for them. State that you want men under 18 and women between 18 and 40 to learn mechanical and sales work with the object of entering your employ permanently.

Start as large a class as you want to with the understanding that from the class you will select only so many and will grant the others permission to enter the employ of any other dealer in town.

## When to Hold Classes

Hold the classes evenings from 7 to 8.30 or whatever other hours are convenient to yourself and the students. Start as early as possible and end as early as you can. Don't hold the students late. Many of them are working days at

other occupations and too much will lessen the efficiency of your school work.

You can schedule the classes to suit yourself, but you might teach service Mondays, Wednesdays and Fridays and salesmanship Tuesdays, Thursdays and Saturdays.

The classes should be held in the salesroom, shop or some other room suitable for the subject you are to discuss.

## Choosing Students

Be careful in selecting students. When you detect a man or woman who seems to be in the thing just for the adventure of it weed him or her out at once. Make it a serious business venture and so emphasize at the start. Do not admit any student who seems to lack this stability. What you want is people who will stay with you. It costs money to train employees. If it takes a month before a mechanic is worth \$20 and if you pay him \$20 from the start it costs \$80 to train him. If it takes a salesman 6 months to make good it has cost you a half year's salary to train him. If he stays only until he is useful you are out all you have paid during the training period.

## Teaching Mechanics

1—Your equipment is a schoolroom, mechanical parts, blackboard, chalk, pointer, erasers, blueprints, catalogs, photographs, instruction books and other data concerning the things you are to teach.

2—Your teacher is yourself or some competent man in your organization. Begin by teaching what makes a car go, stating that the motor furnishes power, the power goes back through the drive of the rear wheels and that the clutch hitches the power and the wheels together.

Then go back and teach carburetion and the other facts allied with what makes the motor go. Take up the different parts one by one, always showing how each part is related to the others.

3—Take parts to pieces and put them together again, and have the students do the same thing.

4—After the students understand the car generally and can handle tools, take several frequent but not complicated jobs and teach one to do one job and another

another job until each student is good at some one job. When a student understands mechanics generally and can do one job well the student is ready to go to work in the shop. Additional teaching will add other jobs to the student's repertoire and much will be gained through doing helper work.

5—You can use a certain number of women in mechanical work, their capacity being limited only by the weight of the parts to be handled and the strength required.

## Teaching Salesmanship

6—Teach first what it is the student is to sell. Give a general idea of the uses of every article and every part of it. For example: Teach the different uses of a car and the uses of the radiator thermometer.

2—Then teach the sales points and require the students to become adept in handling these.

3—Then teach the value of your sales points in competition.

4—Take up then salesmanship itself. Take up first the ethics of the profession. Teach courtesy, frankness, confidence, neat appearance and those other points that make or lose sales.

5—Go then to the securing of prospects and how they are handled in the office files.

6—Show how to approach a prospect, giving an actual demonstration. Be sure you can do this right yourself before trying to tell any one else to do it. It is one of the most bungled jobs in the business.

7—Show how sales are followed up, by personal calls, telephone calls, letters, etc., and how to have a new sales point each time you call and how to leave the door open for the next call when you leave.

8—Teach how to close, illustrating with your best closer's best methods.

9—When a student completes this course he or she should be able to start sales work. Select the best ones and give them a chance. **BUT JUST BECAUSE THEY HAVE GONE TO WORK DON'T STOP TEACHING THEM.**

# How the Manufacturer Can Help His Dealers Get By

---

*The Manufacturer, with His Opportunities for Wider Observation, with His High and Influential Standing with His Dealers, Can and Should Bend Every Effort to Help His Dealers Ride Over the Troubled Period. Several Have Already Taken Such Steps. Franklin and Studebaker Have Held War Conventions, and Dort Is Issuing Each Thursday a Bulletin Containing Definite War-time Business Instruction and Advice. The Sentiments in the Dort Messages Are Worthy of an Echo and Repetition by Other Manufacturers. The Car Maker Who Turns His Gigantic Machinery Into the Production of War-time Profits and Who Neglects His Dealers Entirely Is Withdrawing One of the Cornerstones of His Business*

---

## THE DEALER'S PROBLEM

*Bulletin No. 1 of the Dort Motor Car Co. to its dealers*

AS we see the dealer's problem it is at bottom, not so very different from our own. You are engaged in selling automobiles for the very same reason that we are engaged in building them—because you see in it not so much **PRES-ENT PROFIT** as **FUTURE ADVANT-AGE**.

You have watched with us the almost miraculous and certainly unparalleled growth and development of this enormous industry. To-day it ranks third among the great manufacturing interests of the country and is among the best customers of iron and steel and railroads—the only two industries that lead it.

Such a structure cannot and will not be destroyed—"cannot" because it is too firmly established—"will not" because it is too vital to the economic welfare of the nation.

**•YOU ARE A PART OF THIS WONDERFUL INDUSTRY—A MOVING, GROWING, PROUD PART OF IT. YOU HAVE STAKED YOUR JUDGMENT AND YOUR MONEY IN IT—NOT AS A MERE TEMPORARY SPECULATION, BUT AS A LIFE WORK WHOSE GREATEST REWARDS LIE AHEAD.**

What then? It is not our province to advise you, but it is our **DUTY** to give you such light as may be of help to you in shaping your plans.

There will be comparatively few automobiles built in the near future—how many or how few depends entirely upon the course and demands of the war.

That is a **FACT** we all must face, and in facing it there are angles to which we should apply our very best thought, deliberation and judgment.

As for this company, our path is clear. It is—first of all—to help win the war; then to "carry on," as the British say; to keep our organization together; to maintain the prestige we have won; to impress the **PERMANENT** character of our institution; and above all, **TO BE READY WHEN THE GLAD WORD IS GIVEN TO "GO."**

We have yet to hear from one of our distributors who has any idea of quitting—not one who has a thought other than to go on under the same old shingle at the same old stand. There will be some re-adjustment, some reduction of overhead, but the **VISION** of these distributors takes in **"THE SILVER LINING"** as they look "up and beyond."

**SOME OF THEM ARE TAKING ON TRACTORS AS A SIDE LINE. OTHERS WILL HANDLE TRUCKS. MANY WILL PUSH ACCESSORY SPECIALTIES. ALL OF THEM WILL STAY IN CONSTANT AND FRIENDLY TOUCH WITH DORT OWNERS AND THUS MAKE SURE THAT THE**

**BEST POSSIBLE PERFORMANCE AND SERVICE ARE GIVEN THESE OWNERS.**

They can see—as we see—a brilliant prospect ahead for the automobile dealer who is organized and prepared for business after the war. They realize—as we realize—that organization and preparation is the gradual process of years. They know—as we know—that the good-will they have accumulated through long and persistent effort is a priceless asset and easily to be wiped out by a period of inactivity.

Good-will bears in the automobile business a special significance. It is created not principally from selling good cars, but in **KEEPING THEM SOLD**, from taking a vigilant interest in them after the sale so that owners may obtain the best results.

**THE DEALER WHO KEEPS CLOSE TO HIS CUSTOMERS AND THEIR WANTS DURING THE COMING PERIOD OF CURTAILMENT IS THE DEALER WHO WILL BE STRONGEST WHEN VOLUME PRODUCTION IS AGAIN RESUMED.**

In this, his motive is by no means entirely unselfish, for he is pursuing the soundest maxim of business, namely, **"BUILD FOR THE FUTURE."**



## Dolling 'Em Up

*Another bulletin from the Dort Motor Car Co. to its dealers*

IT appears to us reasonable that in case a sufficient supply of new cars is not available to meet next year's demand, there will be a great increase in the call for ACCESSORIES AND SERVICE to make the old cars more attractive and satisfactory.

WHEN HE FINDS THAT HE CANNOT GET A NEW CAR, THE THING MOST CERTAIN TO OCCUR TO THE OWNER IS TO GET THE "OLD ONE" FIXED UP.

Post yourself regarding the condition of every Dort running in your territory (if you have not already done so) and be ready to make your suggestions to the owner when the proper time comes. This will accomplish the double purpose of locating profitable work for yourself and at the same time exhibiting your interest in the owner's welfare.

This war has already accomplished one good end for the automobile dealer. It has eliminated many of the unreasonable free service expectations of buyers. The latter realize at last that printed warranties are not mere "scraps of paper" and that they can expect no more than has been specifically promised them. The old practices of giving away labor and parts, where no valid claim exists, will probably never return because people have gotten out of the habit of asking it.

Therefore, it is our opinion that there will be a lot of profitable overhauling and re-equipment. We believe so because there is great general prosperity. Car owners insist on COMFORT and are thus sure to "doll up the old bus" when they know a "trade-in" is impossible.

WE HAVE POINTED OUT TO YOU IN OUR FIRST BULLETIN WHY THE DORT AGENCY IS A VALUABLE FRANCHISE TO HOLD ON TO—WHY THE GOODWILL YOU HAVE BUILT UP FOR YOURSELF IS A PRICELESS ASSET—THE ATTITUDE OF OTHER DEALERS—THE CERTAINTY OF A BRIGHT FUTURE AND A SUMMARY OF THE SITUATION AS IT NOW APPEARS TO US.

It is fair in addition to add our conviction that many dealers are going to make money next year, EVEN IF NO PASSENGER CARS ARE AVAILABLE. It is up to the individual to figure out how he can best do this, and those who use the best judgment in determining their policies are the ones who will achieve the best results.

## Building for the Future

*Another Dort bulletin to Dort dealers*

THE Dort dealer who keeps "going" regardless of the immediate supply of passenger cars, has during this period a great opportunity to establish himself firmly in the confidence of his community.

YOU OF COURSE REALIZE THAT A VERY LARGE PERCENTAGE OF CARS ARE SOLD ON THE INDIVIDUALITY OF THE DEALER—WITH PARTICULAR REFERENCE TO HIS ABILITY AND PURPOSE TO STAY IN BUSINESS.

Most owners are largely dependent upon the dealer for the satisfactory operation of their cars—no matter how good the car itself may be. Having neither a "mechanical mind" nor the "patience of a thinker," they want to know that an expert is at hand ready to give them advice and assistance when required.

HARRY S. DANIELS, advertising manager of the Dort Motor Car Co., first analyzed the Dort dealers to learn how they stood. He found that 10 per cent expect to go to war and the rest intend to stay in business. His analysis follows:

Summary of questionnaires received from Dort dealers up to and including September 28th, 1918.

89 per cent intend to stay in the automobile business.

49 per cent handle trucks.

32 per cent handle tractors.

38 per cent handle no other car than the Dort.

60 per cent handle a general line of accessories.

75 per cent handle miscellaneous lines.

67 per cent operate a service department.

56 per cent operate garages.

44 per cent conduct gasoline

10 per cent expect to be called into military service.

THE DEALER WHO DECIDES TO STAY IN BUSINESS IN ANTICIPATION OF THAT FUTURE PROSPERITY WHICH IS AS SURE TO COME AS TOMORROW'S SUNRISE, WILL HAVE A TREMENDOUS ADVANTAGE OVER COMPETITORS WHO QUIT AND TRY TO "COME BACK."

HE WILL HAVE EARNED THE REPUTATION OF PERMANENCY AND REAP THE BENEFITS OF THAT PUBLIC CONFIDENCE WHICH HIS COURSE IS CERTAIN TO CREATE.

On the other hand, the dealer who at this time pulls down his sign, locks his doors and denies further obligation to owners, will encounter difficult obstacles in attempting to resume operations later on.

No matter how much credit is given his good intentions, there will be written indelibly in his record that, when most needed, he "wasn't there." It will be urged against him that he who quits once may quit again.

One of our successful dealers puts it this way:

"IF I DECIDED TO SUSPEND NOW, IT WOULD BE FOR GOOD, FOR I COULD NOT UNDER THOSE CIRCUMSTANCES EXPECT TO RETAIN THE GOODWILL OF MY CUSTOMERS. HOWEVER UNDESERVED, I WOULD HAVE TO START AGAIN WITH THE HANDICAP OF A POOR REPUTATION."

That dealer is studying ways and means to "carry on," realizing that now is his opportunity so to fulfill his obligations to those buyers who trusted in him, that there can be in the future no question raised as to his stability.

He appreciates the unquestionable future of the Dort car. He knows this company's bright past, its present strength, its steadfast ambitions, its high ideals, its ample facilities and that the solid worth of its product means certain growth. He is going to "hang around" and grow too.

The outbreak of the war found this company on the threshold of an expansion that would have soon made a Dort dealership one of the most valuable in the country. Definite plans along these lines are far developed and ready to be released when the war clouds break.

We are pretty "sweet" on our retail organization as it exists to-day. We believe it embodies an unusually liberal percentage of brains, integrity, ability and loyalty. We want to see it held as closely intact as possible.

We hope that our feeling in this respect is reciprocated and we think it is. Our information indicates that a very large percentage of Dort dealers are going to "stick to the ship," knowing that it is a seaworthy craft and bound to come into port laden with a cargo of prosperity.

## If You Need Help Try This Plan

*Dort urges dealers to try women mechanics*

Do you know that there are many automobile dealers employing women as mechanics?

This is the fact and, moreover, it is

said that the fair ones are making good on the new job.

Instead of pooh-poohing the idea, you fellows who are shy of help ought to take

a good look around and pick out a few husky girls for a try-out.

You will find them right in your community anxious for the job, quick to learn it, energetic and trustworthy. According to reports, they are averaging better than the men.

Put an advertisement in the columns of your local newspaper something like this:

**"WOMEN WANTED TO LEARN  
AUTOMOBILE REPAIRING."**

Sign your name and address to it and await results.

If you are in need of aid, you will be over-looking a good bet if you do not try this. It has solved the problem for others.

Why not for you?

# The Jobber,

## *The Middle Man of Merchandise Is Now The Guide and Teacher of the Dealer*

### Preserve Your Trade Until We Win the War

#### Help Your Dealer Stay on the Map

IN times of peace the jobber is the supplier of the dealer's needs.

In peace times the dealer's needs are mostly merchandise, so far as the jobber is concerned.

In these times the dealer's need is for two things: 1—Merchandise, which he yells for and which doesn't have to be sold to him, and 2—Advice and counsel as to how to get by and stay on the map until we win the war.

How can the jobber help? What can he do to supply this advice and counsel?

For one thing, he can get his salesmen together and have a fine, instructive session on the fathering of dealers by the jobber's salesmen.

He can impress upon the salesmen the importance of keeping the salesman's customers going until we win the war.

#### Proper Accounting

The thing most dealers are in greatest need of is definite knowledge as to where they are going. They need proper accounting. The jobber is a better accountant than the dealer—or should be—and ought to be able to pass some of this information along to the dealer.

The salesman can learn just what shape the dealer's books are in and report to the home office which can make to the dealer an offer of co-operation. If handled diplomatically no dealer should object to assistance of this kind. It will cost the jobber something but he will retain good-will and customers.

The salesman can also show the dealer how to effect economies in various parts of his business. The jobber can work

out these economies himself and can find a lot more on other pages of this issue of Motor World.

#### Increased Income

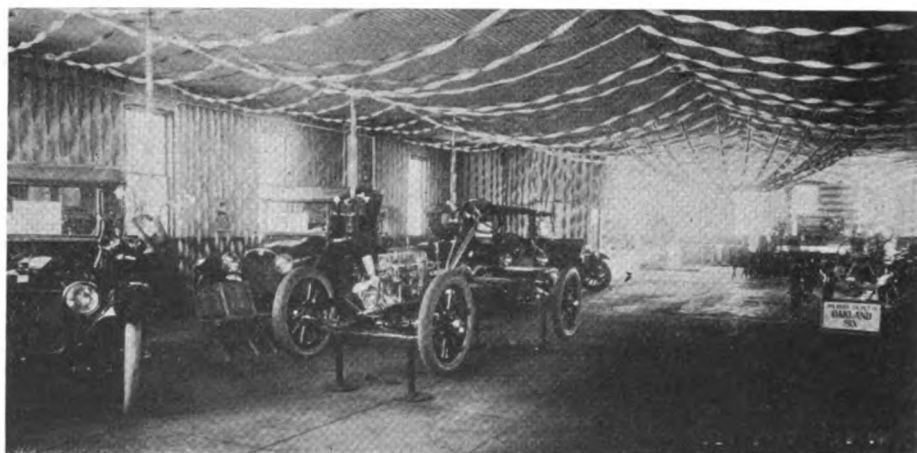
There is also the dealer's need for increased income, which the jobber can suggest from his own investigations. This issue also suggests many points on this question.

All the way through this trying period the jobber should keep a close watch on his dealers. **HE CANNOT AFFORD TO LOSE THEM.** They are the foundation

upon which he will rebuild after we win the war.

This means that every jobbing salesman must be both a seller of goods and a missionary man. He should supply the things with which the dealer works and then tell him how to work to best advantage.

The jobbing salesman can do no better than take this Winter Business Number of Motor World and use it as a text book in helping his dealers survive the great world emergency which now confronts us.



Shows will be few this year. But this does not prevent the dealer from having a private exposition in his place of business. He will not interfere with the war in any way. All that is necessary are a few decorations, invitations, advertising and rehearsal of salesmen. This picture shows how the Up-to-Date Auto Co. of Sauk City, Wis., held its own show last winter. If he has one this year it should include a tractor, truck and farm light plant

## HE WANTS SYMPATHY—WHAT WILL YOU GIVE HIM?



*Add More Liberty Loan Fuel To The Fire.*

# After the War What?

? ? ? ? ? ?

**Where will you stand ?**

**What will you do ?**

**What will happen to business ?**

**R**IGHT now the big thought is to win the war. The next big thought is about what will happen after the war. We are all anxious to know how the ending of the war will affect each one of us.

As a first thought let us accept as fact that the present enormous production of war materials must continue until Germany is licked. The Kaiser will talk about peace from time to time, but there will be no peace until the German military machine crumbles and Prussian militarism goes down in the slime of its own creation.

Any attention that is paid now to Germany's peace talk is that much time given to the Kaiser's worried armies to get back in shape for fighting a little longer. Our job is to keep fighting and let the Kaiser do the talking until the Kaiser quits fighting—then we can do some talking, and the Kaiser will do the listening.

Wherefore, we must keep our war machine spinning until the war is won. This means that the tremendous demands on materials and labor will get greater and greater until the day of peace.

When we can see that we no longer need to keep increasing our armies there will be a let-up in the demands for steel, coal and labor, and there will be a tapering off. The drop won't be too abrupt, because we

must leave our military machine in good shape for use during the European reconstruction period and to guard against any other petty trouble makers. We must make sure.

**Let us set aside a few pet ideas of some folks. There is not going to be any great drop in the price of food. Prices have been held down to lower-than-Civil-War prices by big percentages. If there had been no Government control, prices would be soaring. But as it is they are down at fairly low levels, and when the war ends they are not going to drop back the next day. They may NEVER drop back much. But, anyway, there will be firm food prices for a long time—maybe always.**

**There is not going to be any great decrease in the price of labor. Workers have been on the up-grade for a generation. They will not drop back. There may be some decline in the price of unskilled labor, which has been drawing fabulous prices in shipyards and other places, but the skilled and semi-skilled labor that is necessary in this business will probably command even better prices during future years. And the man who would command good wages must acquire skill. Drifters will not be able to enjoy beds of ease.**

**There probably will be Governmental regulation of the readjustment of labor when the army is mustered out, but, with all that, there are certain conditions that will prevail. The boys who grew up in your town and had jobs with you may never care to come back. They have seen the great outside world. They have been torn from the habits of the home town. They may go back to France, to other parts of the United States, or almost anywhere. If they married out-of-town girls they may settle there. If they found sweethearts in France they may stay there. Many will go to the farms of the West. Many will seek new lines of work.**

**The immense Government munitions plants will turn to peace industry. These plants, which are well built in many cases, provide existing factory facilities for which occupation will be provided. We shall have new industries, all of which will demand labor, coal and materials.**

**We shall go after export trade, which will help make our mills and factories go at higher speed than before the war.**

**The point we make is that there is going to be no riding back to the old ways when the war ends. Conditions will never be the same again, and the man who wins out will be the man who gets ready now as far as he can for the after-war days.**

**This wonderful speeding up for export and domestic trade and for new lines of industry will not, of course, come in a minute. That will be the condition after the readjustment period. Wherefore, we wonder what will happen during the readjustment period—the day that peace comes.**

**At first there will be great rejoicing. There will be celebrations, bonfires, jubilees and the almost-riots that are the outburst of a people whose hearts are glad.**

**Turn this page**



Then this will pass away. After the first great outburst there will be a tapering off in the enthusiasm, and suddenly America will begin to rush back to peace the same way she rushed into war—once she decided to start.

A few poorly balanced men will rush back too suddenly into various lines of business, with limited capital, without sufficient preparation. Some will be lucky and succeed and call themselves wise, while others will fail.

**The men of greatest foresight will begin to open up peace-time activities as soon as they see that times are sufficiently normal to make business pay. Men of less foresight will sit tight a little longer, but by the end of a half year—or a year at most—the hum will be heard and we'll be off to the big race.**

Bankers will sit tight longest. It's their favorite indoor sport.

The car factories that have gone into trucks will produce both cars and trucks. Truck factories will turn to peace-time production. Tractor factories will be active. The tractor business will go through what the car business went through. There will be all sorts of upstarts and freak designs, which will puff and die. The dealer should look well to the financial standing of the company that makes the tractor he proposes to sell.

What will be the dealer's part in this period? He must first get things to sell. And for these he must wait until they are produced. We shall see all sorts of advertising to the effect that "we shall be getting cars soon. Wait for us." And there will be new dealers with new cars, all clamoring for the public to "wait and buy mine."

But the dealer who will have the biggest advertising asset will be the one who can say: "We are solid, sound and substantial. We did our bit and still were able to keep going. We have been here 15 years. We shall be here for years to come. It pays to buy your car of a house that is on a sound business basis."

Folks will take a lot of stock in that argument, for there will be many upstarts and unreliaables and a great flock of unknowns, among whom will be those dealers who lose heart now and quit when there is no necessity for quitting.

The farther we go beyond the war and the more settled things become, the greater will become the public's buying power, for the steadier and surer will become the incomes.

The dealer will have to get labor for his sales force and his shop. He will be able to get some from the returned army, but he shouldn't bank too much on that, for every one is relying on getting some of his former workers back again—and many won't want to come at all. Therefore, the dealer should begin NOW, as stated elsewhere in this issue, to train workers, both men and women. There are two reasons:

**1—That he may have the nucleus of an organization for after the war.**

**2—That he may become skilled in training employees, for this MUST BE DONE AFTER THE WAR.**

Competition will become keener after the war. We shall have new methods and ideas. The men from the war will never go back into the old ruts. Many of them will start in business for themselves. We are going to have an era of new ideas, clean toilets and real merchandising. The boys with dirty places, unwashed and unused windows and the rest of the trashy stuff will have to go.

**The dealer should NOW get the nucleus of a shop organization, the nucleus of a sales organization, the PLANS for after the war. He should plan sales and advertising appropriations, KNOW where he can get the money, and be all ready to start in a big way when he sees that THE DAY HAS ARRIVED.**

# Selling Accessories a Big Bet

## PUSH WINTER GOODS

---

*THE selling of accessories is a source of possible big income for the dealer and garageman, and the securing of this revenue is an amazingly simple proposition. Several years ago in its Dirt vs. \$'s campaign Motor World pointed out the possibilities in this field and those who took the advice offered at that time have since secured satisfactory profits from this department of business.*

---

ONE way they can't be sold is to hide them under the back stairs and make them one of the secrets of your business. You sort of have to take the customer into your confidence on the subject or he won't co-operate with you.

There are several plain and direct steps to accessory profits:

1—Clean up the place of business and make it look like a big city drug store.

2—Provide window display facilities. Change the display every week or oftener and **KEEP THE WINDOW CLEAN.**

3—Provide showcase facilities.

4—Put a showcase, neat, clean and with price cards—or without—in the shop or service station where it must be seen by all the car owners who enter. **THIS IS YOUR BEST BET IN SELLING ACCESSORIES.**

5—When you send out mail enclose small pamphlets and other literature advertising certain accessories. Use one

thing one week, or month, and something else the next.

6—Use special form letters when you have a certain article you want to push.

7—Have it the duty of some man, or woman, to solicit car owners who enter the service station, showing some particular accessory, and **ALWAYS SEEKING TO SELL SOMETHING MORE TO EVERY CUSTOMER WHO BUYS ACCESSORIES.** For example: A purchase of tire supplies of any kind suggests other tire supplies, etc.

8—The big and not-to-be-overlooked point is this: Push **WINTER ACCESSORIES.** Sell those things that are designed for **WINTER USE**, such as heaters, which you can install if they are that kind; robes; heated steering wheels; gloves; winter tops; anti-freeze products; repainting outfits; and all other winter wares. They are almost without number.

9—Get in a reasonable stock **NOW.**

10—**DISPLAY — DISPLAY — DISPLAY — DISPLAY.**

# Things to Sell and Things to Use

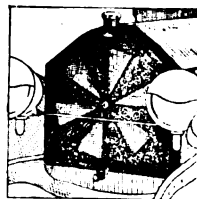
## PROFIT MAKERS AND WORK SAVERS

### PREMIER RADIATOR COVER

This is a heavy radiator cover made of water and oil-proof material lined with heavy wool cloth. The curtain in front can be rolled up and held by straps and fasteners. Prices \$3 and \$3.50 for front style; \$5.50 for hood style.—Premier Auto Novelty Mfg. Co., Inc., 129 Reade Street, New York City.



Premier Radiator Cover



Antidam Radiator Cover

### ANTIDAM RADIATOR AND HOOD COVER

This is a radiator cover made of heavy blanket cloth and sheet steel with a series of openings which are opened and closed by a shutter which operates from the outside. Made for all car models at prices from \$6 to \$7 for the radiator covers and \$3.20 to \$5 for the hood covers.—Glover Equipment Co., 412 Capitol Boulevard, Indianapolis.

### OVER-WAY OVERHEAD TROLLEYS

These are tracks and carriers to be suspended from the ceiling and to carry chain or rope hoists. Carriers have ball or roller bearing wheels and switches can be put in the track wherever desired. — Richards-Wilcox Mfg. Co., Aurora, Ill.



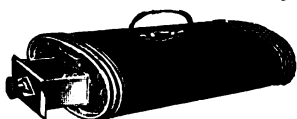
Over-Way Overhead Trolley

### NOBLE'S BODY POLISH

This is a liquid body polish to remove dirt and impart a luster to the finish.—Noble Piano Co., 971 Woodward Avenue, Detroit.

### LEHMAN HEATER

This is a hand or foot heater that burns cakes of compressed fuel contained in a drawer in the heater. Made of galvanized non-rusting metal covered with insulating material. Price \$6.50.—Lehman Bros., 10 Bond Street, New York City.



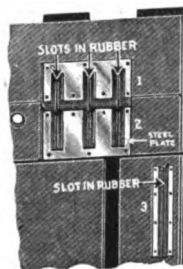
Lehman Heater

### HUDSON CRANKCASE REPAIR ARM FOR FORDS

An arm which may be speedily bolted in place on a Ford to replace a broken crankcase arm, thus avoiding taking out the engine, taking it down and then having a new arm riveted on. The arm is held firmly in position by four bolts. Price \$1.50.—Hudson Motor Specialties Co., Real Estate Trust Bldg., Philadelphia.



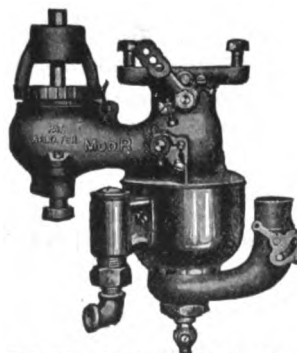
Hudson Repair Arm



Presto Protector

### PRESTO ALWEATHER PROTECTOR FOR FORDS

This is a device to close the slots in the floorboards in the Ford around the pedals and the brake lever. Strips of rubber are held in frames so that they exclude the outside air. Price \$1.75 per set complete with screws.—Metal Specialties Mfg. Co., 338-352 North Kedzie Avenue, Chicago.



Schebler Model R Carburetor

### ROGERS AUTO-BRITE

This is a liquid preparation for restoring and preserving the body finish. Price 65 cents per pint.—Detroit White Lead Wks., Detroit.

### SCHEBLER MODEL R CARBURETOR FOR FORDS

This model has but 2 adjustments, the low-speed needle and the air valve. The carburetor with the attachments provided will fit the Ford. Price \$18.—Wheeler & Schebler, Indianapolis.

### MARTIN CONVERTIBLE BODY

This is a commercial body that can be quickly changed from open to closed or vice versa. As an open body, it has 6 posts, the cab having a windshield, fore-door, side sash and curtain back of driver's seat. As a closed body it is fully enclosed with full-vestibule front and side curtains.—Martin Truck & Body Corp., York, Pa.



Martin Convertible Body

### SELL ACCESSORY SATISFACTION

My accessory customers bring me more customers. They bring more business than anything else. I give satisfaction in every transaction.

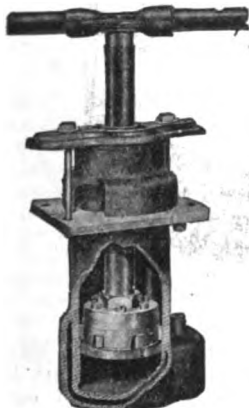
None gets away dissatisfied. The main thing is to put before a customer only one thing at a time. There is danger of putting too much before a prospect at one time. I use newspaper advertising, and it is all uniform. That is, all my printed matter has the same uniform design and monogram of the firm.—C. W. Stiess, Minneapolis.



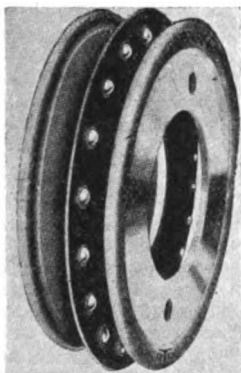
Prest-O-Lite Battery



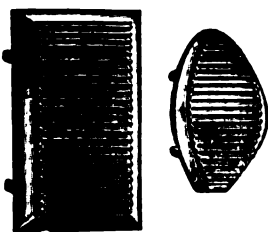
Automatic Time Stamp



Storm Cylinder Reborer



Bailey Thrust Bearing



Perfection Pedal Pad

### PREST-O-LITE STORAGE BATTERIES

These are batteries for starting, lighting and ignition. The plates are of special construction, which keeps the paste locked in, and long life is claimed for the plates. Made in a large variety of shapes, sizes and capacities to fit standard cars. Prices \$17.90 to \$86.—Prest-O-Lite Co., Inc., Indianapolis.

### AUTOMATIC TIME STAMP

This is a time stamp which records the year, month, day, hour and minute automatically from the clock which is contained in the base. Firm name and other logotypes may be stamped at the same time. Prices \$40 to \$70.—Automatic Time Stamp Co., 160 Congress Street, Boston.

### STORM CYLINDER-REBORING MACHINE

This is a portable tool for reboring engine cylinders. The heads are each fitted with 6 cutter blades and a single adjuster operates all the blades. The head is fed gradually and is supported at both ends.—Storm Mfg. Co., Thompson, Iowa.

### BAILEY THRUST BEARING FOR FORD AND CHEVROLET 490

This is a ball thrust bearing to replace the plain thrust washers on the left side of the Ford and Chevrolet 490 differential. Price \$3.75.—George D. Bailey Co., 4500-4508 Ravenswood Avenue, Chicago.

### PERFECTION PEDAL PADS

These are rubber pads to be attached to the clutch and brake pedals of cars, trucks or tractors. The rubber is attached to the pedal with steel frames, which have extensions to be bent in back of the pedal. Made in sizes and shapes to fit almost every make of machine. Prices range from \$1 to \$1.50 per set. The Ford set of 3 sells for \$1.—Auto Pedal Pad Co., Inc., 794 Seventh Avenue, New York City.

### TENAX SHEET PACKING

This is a sheet packing made of long asbestos fiber with sufficient binder and chemical to make it tough. Furnished in sheets 50 x 50 or 50 x 150 in. in thicknesses of 1/64 to 1/4 in.—

Advance Packing & Supply Co.,  
13-15 North Franklin Street,  
Chicago.

### HESS-BRIGHT BALL BEARINGS

Hess-Bright annular ball bearings are made in three weights, light, medium and heavy, for equal shaft sizes. Prices of the light series range from \$3.60 to \$48, medium \$4.50 to \$92, and heavy \$10 to \$150. Spherical-seated thrust bearings \$11.25 to \$26.75; flat seated thrust bearings \$9.50 to \$23.—Hess-Bright Mfg. Co., Philadelphia.

### WOODWORTH OVERSHOES

These are steel-studded leather coverings for pneumatic tires. They are held on the tire by fastening to the rim with flat steel hooks fitting between the bead and the clinch. Made in light and heavy weight, for tires from 28 x 2 1/2 to 31 x 4 in. Prices from \$9 to \$18.—Woodworth Mfg. Corp., Niagara Falls, N. Y.

### UNIVERSAL CARBON BOTTLE

This device feeds kerosene into the cylinders, one at a time through the spark plug hole, into which it is screwed in place of the plug. The cock at the bottom regulates the amount fed into the cylinder. Price \$5.—Carbo-Gas Co., Toledo, Ohio.

### ADAPT-A-LITE PORTABLE LAMP

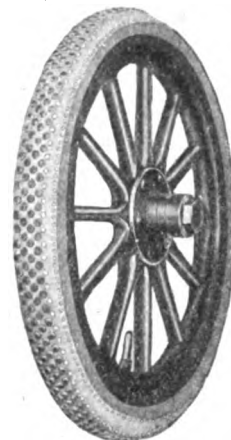
This is a portable shop lamp, the cord being wound on a spring reel so that it is wound up when not in use. Furnished with 12-ft. cord, handle, key socket and steel lamp guard. Price \$3.50.—Anderson Electric Specialty Co., 118-124 South Clinton Street, Chicago.

### WIZARD GASAVER

This is a small device to be fitted to the intake manifold of any car, truck or tractor, and is intended to act as a primer, fuel economizer and carbon remover. It allows a fine stream of air to be added to the mixture at the peak of expansion. A gravity-controlled swing valve decreases the amount of air on hills and allows the full amount on the level. Price \$3.50.—Wizard Gasaver Co., Mercantile Bldg., Rochester, N. Y.



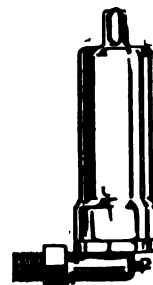
Hess-Bright Bearing



Woodworth Overshoe



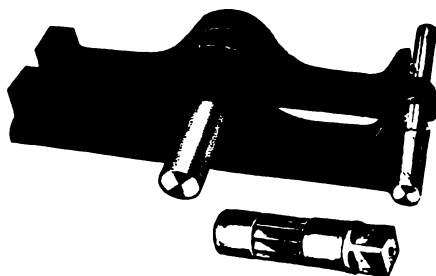
Universal Carbon Bottle



Adapt-A-Lite Wizard Gasaver



Manley Engine Stand



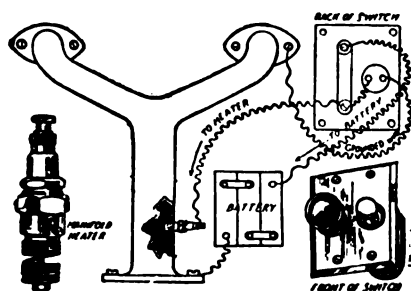
Storm Connecting-Rod Tool



Dayton Wire Wheel



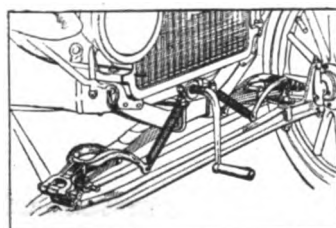
Woodworth Tread



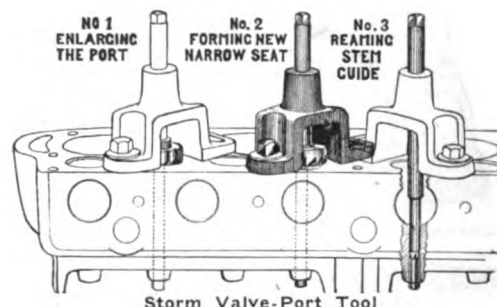
Lepper Manifold Heater



Eason Truck Chain



W. &amp; C. Shock Absorber



Storm Valve-Port Tool



Gem Oil and Grease Gun



Jefferson Tester

### MANLEY STAND FOR FORD ENGINES

This is a portable stand for Ford engines, so constructed that the engine can be bolted to it quickly and then swung into any position and locked there. The base is on large iron castors so that it can be easily moved.—United Engine & Mfg. Co., Hanover, Pa.

### LEPPER MANIFOLD HEATER

This is an electric heater shaped somewhat like a spark plug with a heating coil on the end. It screws into the intake manifold and heats the interior when the current is turned on. Operates from any 6-volt battery. Price complete with switch \$7.50.—Lepper Mfg. Co., 101 North Federal Avenue, Mason City, Iowa.

### GEM COMBINATION OIL AND GREASE GUN

This is a combination grease and oil gun with a capacity of 8 oz. A quick-change nut enables an immediate change from grease to oil. The barrel and end caps are made of steel, brass plated, and the stem and

spout are of brass. The plunger is cork held between two steel washers. Price \$1.50.—E. Edelman & Co., 341-363 East Ohio Street, Chicago.

### WOODWORTH TREAD

This is a steel-studded leather cover for pneumatic tires. It is made of waterproof, non-stretching leather and is attached by rings on each side. There are two styles, center studded with studs only in the center of the tread and full studded with studs in center and thin-headed rivets on the side walls. Made to fit tires 28 x 3 in. to 35 x 4 in. Prices \$21.30 to \$35.30.—Woodworth Mfg. Corp., Niagara Falls, N. Y.

### STORM CONNECTING-ROD TOOL FOR FORDS

This is a connecting-rod-bearing reamer, jig and straightening tool for Fords. It reams the bearing to correct size and alignment and may be set to ream undersize for burning-in work. The straightener checks the alignment of the two bearings in both directions. Price \$30.—Storm Mfg. Co., Thompson, Iowa.

### EASON TRUCK CHAINS

These are truck-tire cross chains with a section covered with leather to snap around the spoke. They can be quickly attached or detached. Made in five sizes for single and dual tires. Prices from \$7.80 to \$24 per set of 12 chains.—Woodworth Mfg. Corp., Niagara Falls, N. Y.

### W. & C. SHOCK ABSORBER FOR FORDS

This is a double-arm shock absorber for Fords, there being 4 coil springs from the ends of the arms to the front-spring bolts. The absorbers replace the front spring shackles and are attached without machine work.—P. H. Webber Co., Inc., Hoopeston, Ill.

### DAYTON WIRE WHEELS FOR FORD AND CHEVROLET 490

These wire wheels have triple-spoke lacings and are quickly changed by simply unscrewing the hub cap, which has a built-in locking device to prevent its coming off in service. A set includes 5 wheels, 4 inner hubs, 4 hub caps, hub-cap wrench, spoke-nipple wrench and outer

hub dust cover for spare wheel. One set packed in a crate and finish in any standard color. Price \$65 for Fords, \$75 for Chevrolet 490. Wheel carrier \$10.—Dayton Wire Wheel Co., Dayton, Ohio.

### STORM VALVE-PORT REAMING TOOL FOR FORDS

This tool reams away the inner portion of the old wide valve seat, reams the seat itself and reams the valve-stem guide 1/64 in. oversize to fit the new oversize valves. This gives a new narrow seat and a true guide. Price \$15.—Storm Mfg. Co., Thompson, Iowa.

### JEFFERSON COMBINATION TESTER

This is a combination device for testing lamps, spark plugs, Ford coil units, horns, grounds, etc. Current is supplied from any lighting circuit or from a battery, and separate places are provided for testing the different parts. Prices range from \$6 to \$10, depending on the kind of current to be used.—Jefferson Electric Mfg. Co., 426-430 South Green Street, Chicago.



**SHALEX RADIATOR CLEANER**

A liquid preparation to be poured into the cooling system to remove the scale. It is left in for a half day while the machine is being driven, and is then drained out and the radiator flushed. Price 75 cents for a 14-oz. can. — Northwestern Chemical Co., Marietta, Ohio.

**TUNGAR RECTIFIER**

This is a rectifier for transforming alternating current to direct current by means of a hot-and-cold electrode principle. It consists of a small glass bulb, similar to an incandescent lamp, in which the rectification takes place. A small compensator or transformer reduces the alternating current and a fuse protects the parts from damage. The whole is enclosed in a square case. Made in three sizes, 2 amperes for charging 3 cells at 2 amperes, 6 amperes for charging 3 or 6 cells at 6 amperes and 6 amperes for charging 3 to 30 cells at from 1 to 6 amperes. Prices from \$18 to \$175. Renewal bulbs \$3 to \$8.—General Electric Co., Schenectady, N. Y.

**VACUUM TYPE S MUFFLER FOR FORDS**

This is a muffler in which the exhaust gases are deflected against a central zone and split up into numerous small discharges, each of which is separately and evenly expanded to atmospheric pressure. The entire muffler consists of two castings with the fins overlapping, the castings being bolted together with 3 bolts. Price \$3.—Vacuum Muffler Corp., 154 Nassau Street, New York City.

**GRAPHITE COATING RIM PAINT**

A graphite-coating rim paint which dries quickly and can be applied while changing the tires. Put up in friction-top cans containing ½ pt. Price 50 cents.—Northwestern Chemical Co., Marietta, Ohio.

**RAYNTITE TOP AND CURTAIN MATERIAL**

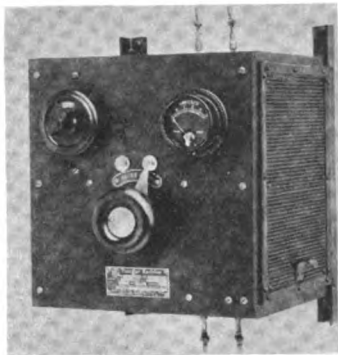
This is a top and curtain fabric coated with pyroxylin. It is waterproof, and will not deteriorate under weather conditions. Made in several finishes and colors and in single and double texture. Packed in 60-yd. rolls 36, 50, 54 and 60 in. wide.—Du Pont Fabrikoid Co., Wilmington, Del.

**NEVER-BURN ENGINE ENAMEL**

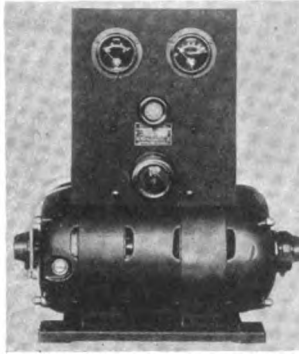
A self-baking engine enamel which is applied with a brush and which needs no filler. Furnished in gloss black and battleship gray. Half-pint cans 50 cents, pint cans 85 cents.—Northwestern Chemical Co., Marietta, Ohio.

**DISPLAY YOUR ACCESSORIES**

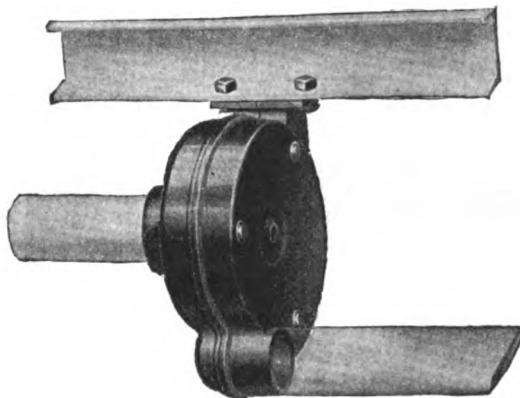
The Auto Mart, Eleventh Street and Grand Avenue, Milwaukee, is located at a point where from 50 to 60 per cent of Milwaukee's traffic passes daily. One display window faces Grand Avenue and the other Eleventh Street. Displays are changed almost daily and each features a "special," attention to which is attracted by means of elegant ribbon signs which come from one of the highest class sign-painting establishments in the city and are expensive, but justify the expense in every way.



Tungar Rectifier



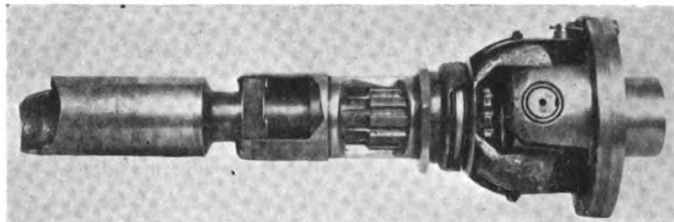
Fort Wayne Battery Charger



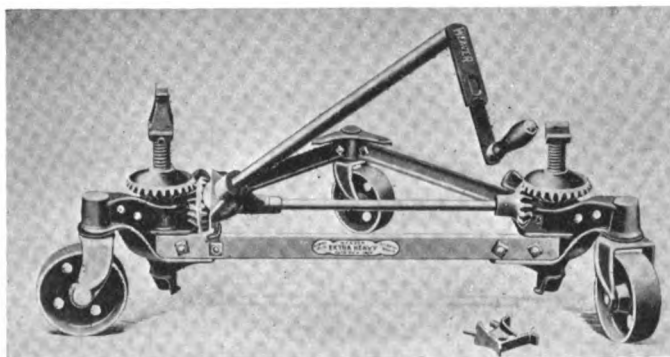
Vacuum Muffler



Break-Not Battery Tester



Sterling Universal Joint



Weaver Extra Heavy Twin Jack

**TIRE-LAC TIRE PAINT**

A tire paint to fill the cracks and pores of a casing to protect it and give it a good appearance. Put up in friction-top cans containing 1 pt. Price 75 cents.—Northwestern Chemical Co., Marietta, Ohio.

**ALLEN ALUMINUM FLUX**

This is a non-acid flux for soldering aluminum. The flux can be used to solder two pieces of aluminum together or to solder any other metal to aluminum. Price \$2.30 per 4-oz. package.—L. B. Allen Co., Inc., 4517-29 North Lincoln Street, Chicago.

**FORT WAYNE BATTERY-CHARGING SET**

This set consists of a motor operated by electric lighting current, a generator which is direct connected to the motor and the necessary rheostats, switches, etc. It is furnished for service on 60-cycle alternating current or direct current incandescent lighting service lines of either 110 or 220 volts. Both types can be had in outputs of 50, 100, 175 or 250 watts for charging batteries of 12, 18, or 24 volts direct current. Sufficient generator field resistance is provided to reduce the voltage so that 6-volt batteries can be charged in any case.—Fort Wayne Department, General Electric Co., Schenectady, N. Y.

**BREAK-NOT BATTERY TESTER**

This is a storage-battery tester or hydrometer contained in a syringe. The bulb and the lower end, including the filling tube, are of red rubber, leaving only the short tube of glass. The hydrometer is contained inside this. Price \$1.—E. Edelman & Co., 341-363 East Ohio Street, Chicago.

**STERLING S-3 UNIVERSAL JOINT**

This is a universal joint that has a turning radius of 36 deg. or 18 deg. in any direction from the normal. It is oil and dust proof as all the working parts have bushings and have a press fit in a keyway that has been broached in, making it impossible for the bushings to work out.—Bearings Co. of America, Lancaster, Pa.

**WEAVER EXTRA-HEAVY AUTO TWIN-JACK**

This is a combined jack and castor for lifting both wheels of either the front or rear axle at once, and is made extra heavy for light truck or very heavy passenger car work. The gear nuts which raise the screws revolve on ball bearings and the diameter of the castor wheels is 7 in. Price \$25.—Weaver Mfg. Co., Springfield, Ill.

**NORWESCO TIRE TALC**

Tire talc put up in a tube with a sifter top. Tube is 2 x 6 in. Price 10 cents. Northwestern Chemical Co., Marietta, Ohio.

**WEAVER AUTO HOIST**

This is a U-shaped frame mounted on castors and provided with chain hoists operated by worm and gear without ratchets. Both chains can be used for hoisting a car from two points, or one chain can be run over the center roller and the car hoisted with this. Height 8 ft. which can be extended to 9 ft., the frame being telescopic. Price \$125.—Weaver Mfg. Co., Springfield, Ill.

**JUMBO COMBINATION GREASE AND OIL GUN**

This is a combination grease and oil gun provided with a quick-change adjusting nut which makes possible an immediate change from grease to oil or vice versa. The plunger is cork and the spout has a removable oil nipple. Made of polished brass and packed in a box. Price \$2.50.—E. Edelmann & Co., 341-363 East Ohio Street, Chicago.

**WEAVER TIRE SPREADER**

This is a device for pulling back the beads of a casing so that the inside can be inspected. A nest of rollers hold the weight of the tire and allow it to roll around. When the desired place is found, the clamps catch the beads and a foot lever pulls the beads down, the center of the casing being pulled into convex shape across a plate. The plate has hooks which may be attached to the beads and the tire taken off the stand in its flat position to be buffed. Price \$24.—Weaver Mfg. Co., Springfield, Ill.

**REAR-AXLE TRUSS ROD FOR FORDS**

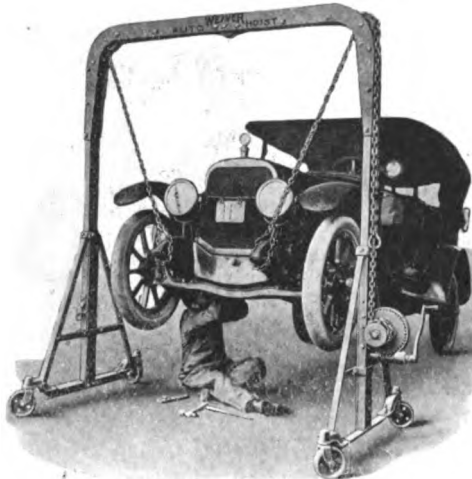
This is a truss rod for Ford rear axles to relieve the axle of the weight and strain so that the rivets will not pull out. It is a steel rod fitted with clamps to clamp around each end of the axle and a turnbuckle to set it up tight. Price \$1.25 for the ½-in. rod, \$1.50 for the 7/16-in. rod. Packed 25 rods to the bundle, clamps separate.—Banner Accessory Mfg. Co., 1314-16 South Seventh Street, St. Louis, Mo.

**BANNER GREASE GUN**

This is a grease gun made of seamless steel tubing and having a cork plunger to prevent grease from coming back over the plunger. The capacity is ¼ lb. of grease and the finish is baked black enamel. Price \$1.75. Packed 6 to a carton.—Banner Accessory Mfg. Co., 1314-16 South Seventh Street, St. Louis, Mo.

**RE-DRESS THE OLD CARS**

The Auto Supply Co., 134 Second Street, Milwaukee, jobber and retailer, is convinced that the curtailment of passenger car production opens the way for the most far-reaching merchandising of accessories yet known. It believes that an owner who may be prevented from turning over his old car as frequently as before is going to have "something new" in any event and will keep dressing up his old car to keep it in the front rank. Frequent visits to him from the supply base with the latest kinks in accessories find a most welcome response.



Weaver Auto Hoist



Jumbo Grease and Oil Gun



Weaver Tire Spreader

Banner Radius Rod Support



Banner Ford Axle Truss



Banner Grease Gun



Non-Gran Bar



Rives Pedal Pad

**NORWESCO TWELVE-TWENTY NON-FREEZE SOLUTION**

A liquid non-freeze solution which can be tested to ascertain the strength after it is placed in the radiator. The correct strength to protect the radiator from freezing to 20 deg. below zero is indicated by 1,220 deg. on a battery hydrometer. Put up in 1-gal. cans, \$1.25; 3-gal. cans, \$3.45; 5-gal. cans, \$5. West of the Rockies an additional 20 cents is charged on each can. — Northwestern Chemical Co., Marietta, Ohio.

**NON-GRAN BRONZE CORED BARS**

These are cored bars of Non-Gran bronze, a special close-grained metal without blow holes or other defects. The cored bars are made in a variety of sizes, so that with the aid of a lathe any bearing or bushing can be renewed in any make of car. The bars are packed in wooden cases.—American Bronze Corp., Berwyn, Pa.

**RIVES PEDAL PAD**

This is a rubber pad for brake and clutch pedals, the rubber being secured to the pedal by a flexible steel band imbedded in the rubber. The rubber pad is corrugated to prevent slipping. Boxed 2 in a set. Price 50 cents per set for Fords, \$1 per set for other cars.—Stevens & Co., 275 Broadway, New York City.

**FABRIKOID TRUCK SPECIAL UPHOLSTERY FABRIC**

This is a strong, durable upholstery fabric for truck or heavy duty use. It has a strong base firmly united with an extra heavy, pliable pyroxylin coating. It is waterproof, looks like leather and is easily cleaned. Packed in 60-yd. rolls, 50 in. wide. Standard color is black, other colors, grains or finishes extra.—Du Pont Fabrikoid Co., Wilmington, Del.

**FRONT-AXLE BRACE AND RADIUS-ROD SUPPORT FOR FORDS**

This brace is to keep the radius rod from bending and to keep the front axle true and rigid on Fords. It is placed beneath the regular Ford radius rod and bolted in place. Made from 1 x 1 x ¼-in. angle bar steel. Price \$1.50. Packed 6 to a bundle.—Banner Accessory Mfg. Co., 1314-16 South Seventh Street, St. Louis, Mo.

**• BUFFINGTON FOLDING TONNEAU CHAIR**

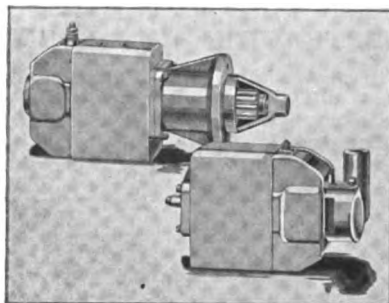
This is a folding tonneau chair constructed for the most part of light steel rod, and having an upholstered seat and a flat back. Price is from \$2.50 up, according to size.—C. A. Buffington & Co., Berkshire, N. Y.



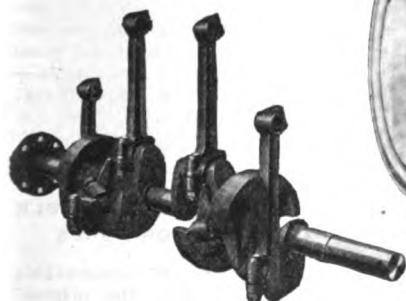
Buffington Tonneau Chair



Shurnuff Combination Manifold



Gray &amp; Davis System for Fords



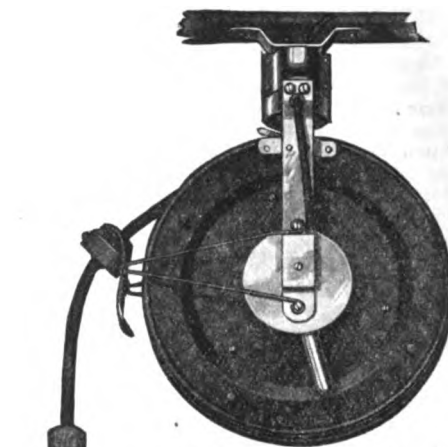
Dunn's Crankshaft Balance



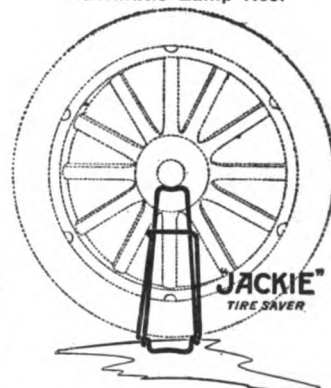
Gray &amp; Davis Truck Lamp



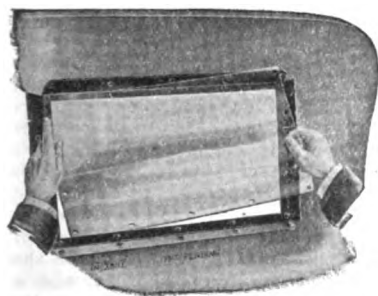
Amazon Cord Tire



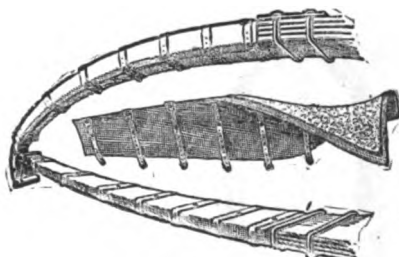
Automatic Lamp Reel



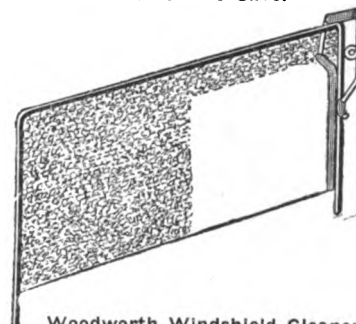
Jackie Tire Saver



Instant Curtain Light



Woodworth Spring Cover



Woodworth Windshield Cleaner

#### SHURNUFF COMBINATION MANIFOLD

This is a combination intake and exhaust manifold for Fords, the intake wall being heated by the exhaust gas to accelerate evaporation. The manifold is attached in less than 1 hr. in the place of the original manifolds and attaches with the same studs and clamps. Price \$9.—Shurnuff Mfg. Co., St. Louis, Mo.

#### DUNN'S CRANKSHAFT BALANCES FOR FORDS

These are weights clamped to the arms of the crankpins to counterbalance the weight of the pins and connecting rods when the engine is running. The weights are attached with 4 bolts, 2 weights opposite each other on each diagonal arm. Price \$12 per set.—Dunn Counterbalance Co., Clarinda, Ia.

#### INSTANT CELLULOID REAR-CURTAIN LIGHT

This is a replacement light for rear curtains. The frame is

of sheet steel and may be attached to the curtain with fasteners or can be stitched. The celluloid is removable for ventilation. Made in several sizes, priced from \$4 to \$5.—Buob & Scheu, Cincinnati, Ohio.

#### GRAY & DAVIS TRUCK LAMP

This is a truck lamp built to withstand severe usage and to keep out water and dust. Standard connection and socket are provided to fit the lamps.—Gray & Davis, Inc., Boston.

#### AMAZON CORD SUPERTIRE

This is a cord tire of multiple ply construction, in which each cord is separated from the others by rubber. The tread is black with a gray side wall. Sizes and prices are: 34 x 4½ \$67.25; 36 x 4½ \$70.55; 35 x 5 \$83.60; 37 x 5 \$87.60; 36 x 6 \$109.50.—Amazon Rubber Co., Akron, Ohio.

#### GRAY & DAVIS STARTING-LIGHTING SYSTEM FOR FORDS

This is a double unit starting and lighting system for Fords,

consisting of a dynamo, starting motor, battery, switches and all items to make the installation. The dynamo is driven from the sprocket on the crankshaft by a silent chain. Price \$100.—Gray & Davis, Inc., Boston.

#### WOODWORTH LUBRICATING SPRING COVER

This is a combined cover and spring-leaf lubricator, the outside covering being leather or imitation leather and the inside being felt which retains and distributes the oil. Made in sizes to fit all cars, prices ranging from 70 cents to \$2.25 per cover.—Woodworth Mfg. Corp., Niagara Falls, N. Y.

#### AUTOMATIC LAMP-EXTENSION REEL

This is a reel that winds up the lamp cord when not in use. It operates like a window shade, pulling it slightly and letting quickly releasing the pawl and allowing the spring to wind up

the reel. Price \$15, including 25 ft. of cord, socket handle and lamp guard.—Cincinnati Specialty Mfg. Co., Powers Street & Sylvan Avenue, Cincinnati, Ohio.

#### JACKIE TIRE SAVER

This is a two-piece jack made of round bar steel and capable of lifting the tires off the floor with one motion of the lever. Made in three sizes: Ford \$2.50; 32, 33, 34-in. wheels \$3.50; 35-in. and over \$4. The price in each case is for a set of 4 jacks.—Nelson-Bacon Mfg. Co., Oshkosh, Wis.

#### WOODWORTH WINDSHIELD CLEANER

This is a windshield cleaner made of No. 4 spring-steel wire with japanned finish and covered with corrugated rubber tubing where it comes in contact with the glass. Can be snapped on instantly. Price 25 cents.—Woodworth Mfg. Corp., Niagara Falls, N. Y.

**RAYBESTOS DISK CLUTCH FACINGS**

These are disk clutch facings of Raybestos, cut in an endless circle and made in a variety of sizes to fit almost every disk clutch made. These rings are packed 20 to the box of one size only. A booklet containing a complete directory of the correct sizes to use for different cars is to be had free.—Raybestos Co., Bridgeport, Conn.

**HOUK QUICK-CHANGE WIRE WHEELS**

This set of wire wheels consists of 5 wheels, 4 inner hubs and 4 hub caps together with a dust cover for the spare wheel, a wrench for the hub cap and another for the spoke nipples. The hubs are self-tightening with a mechanical locking device that locks each wheel securely. The hub-cap wrench presses down the locking latch, unlocking the hub and as soon as the wrench is removed, the latch locks the wheel.—Wire Wheel Corp. of America, 1700 Elmwood Avenue, Buffalo, N. Y.

**WASCO GARAGE HEATER**

This is a hot-water heating system for garages. The water is heated in a small furnace which has an automatic regulator to adjust the drafts so that the temperature is maintained constant. Can be adapted for different size buildings by adding additional water coils. All standard connections and piping are cut and threaded ready to set up. Systems for from 1 to 10 car garages at prices from \$83 to \$380.—W. A. Schleit Mfg. Co., Inc., Syracuse, N. Y.

**WEAVER GARAGE PRESS**

This is a 20-ton press with a leverage of 3000 to 1. The bolster can be set at any distance from the bar up to 48 in. The distance between uprights is 32 in. The movement of the bar is 12 in. and the handwheel provides for quick placing. Price \$85.—Weaver Mfg. Co., Springfield, Ill.

**NEVER-LEAK CYLINDER-HEAD GASKETS**

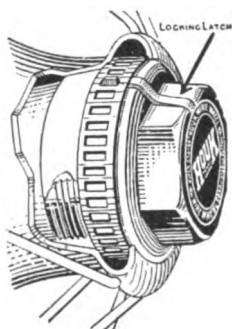
These are cylinder-head gaskets made of metal and asbestos, cut out exactly the correct sizes to fit various engines, the cutting being done with dies. Standard gaskets are carried for nearly every make of engine with a removable cylinder head—Fitzgerald Mfg. Co., Torrington, Conn.

**ALLEN SOLDERING LIQUID**

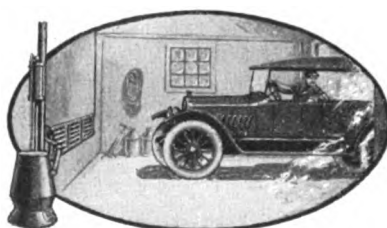
A non-acid soldering liquid especially adapted to galvanized iron or steel. Put up in bottles, cans, kegs and barrels. Price 5-lb. bottle \$1.90, 10-lb. can \$3.30.—L. B. Allen Co., Inc., 4517-29 North Lincoln Street, Chicago

**SELL TRACTOR ACCESSORIES**

The Western Motor Supply Co., 408 Jefferson Street, Milwaukee, lost no time in investigating the possibilities of tractor-accessory business, and has worked up a large trade in electric lighting units and special fixtures designed to assist tractor owners in operating at night.



Houk Wheel



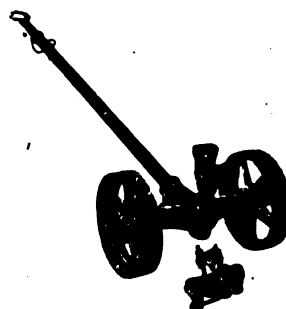
Wasco Garage Heater



Weaver Garage Press



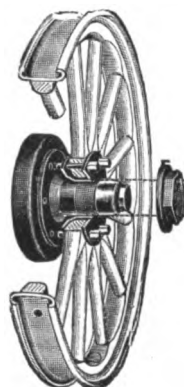
Never-Leak Gaskets



Weaver Auto Ambulance



Imperial Folding Chair



Minute Demountable Wheel



Howard Duster

**WEAVER AUTO AMBULANCE**

This is a device for towing crippled cars. It bolts to the axle of the car to be towed, the weight of the car resting on the wheels which are fitted with roller bearings. The car is towed by means of the telescoping tongue which may be made from 6½ to 12 ft. long. The height can also be varied. Price \$36.—Weaver Mfg. Co., Springfield, Ill.

**IMPERIAL FOLDING TONNEAU CHAIRS**

These are folding chairs for use as auxiliary seats in the tonneau or for camping or lunching. Made entirely of steel with the exception of the upholstered parts which are padded with felt and covered with waterproof leather. Steel parts japanned. Price \$2.50.—Imperial Bit & Snap Co., Racine, Wis.

**MINUTE DEMOUNTABLE WHEELS FOR FORDS**

This is a set of demountable wheels for Fords, the original Ford wheels being retained, but a new set of hubs replacing the regular set. The new flange which is inserted in the wheels is threaded, and these threads screw onto a corresponding thread on the inner hub, the whole being retained in place with a single lock nut. It is only necessary to take off this lock nut, unscrew the wheel and replace with another. The set consists of 4 main hubs, all of the auxiliary parts to fit on the wheels, an extra wheel and a wrench. Price \$30.—Hill-Smith Metal Goods Co., 82 Brookline Avenue, Boston.

**CINCINNATI RUBBER HOSE**

Cincinnati rubber hose is made for radiator connections and air pumps. Radiator hose is made in sizes from ¼-in. 3 ply to 3-in 3 ply in 3-ft. lengths. The sizes of hose in greatest demand for air work are ¼-in. 5 ply for hand pumps and ½-in. 5 ply for mechanical pumps, the latter also being supplied with wire wrapping to prevent abrasion.—Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.

**HOWARD HANDLED DUSTER**

This is a duster which retains the dust in the fiber, which is chemically treated to retain it. To remove the accumulated dust from the device it is only necessary to wash it. Price \$1 to \$1.50, according to size.—Howard Dustless-Duster Co., 261 Franklin Street, Boston.



Weaver Tire Changer



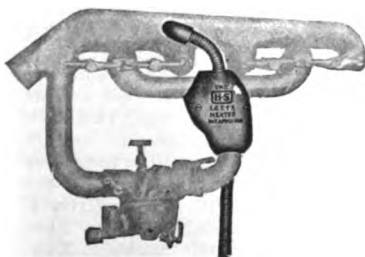
Weaver Bucket Pump



Weaver Auto Oiler



Prest-O-Grip Chains



Letts Manifold Heater

## REVIVE THE DEAD ONES

Keeping customers is just as important as getting new ones, says the Auto Supply Co., Milwaukee. Periodically all accounts are carefully searched and the "dead" ones listed for investigation as to the reasons why they are inactive. If it is due to dissatisfaction, personal calls are made to effect a satisfactory adjustment, and sometimes concessions are made even if the customer's demands seem unreasonable.

### WEAVER UNIVERSAL TIRE CHANGER

A machine for changing tires on rims, all the work of pushing in the beads being done with rollers. It is adaptable to all sizes of tires and rims and no pounding is necessary. Price \$65.—Weaver Mfg. Co., Springfield, Ill.

### WEAVER VALVELESS BUCKET PUMP

This is a pump for light greases and oils which will pump new grease from the bucket into the desired part of the car, will suck old grease out of the gearset housing or other part, or the barrel or receptacle can be sucked full of foreign lubricant and discharged again through the hose into a third receptacle without disturbing the contents of the bucket. The lubricant is automatically measured as it is discharged and the flexible hose is made of steel. Price \$14.—Weaver Mfg. Co., Springfield, Ill.

### WEAVER AUTO OILER

This is a combined oil measure and funnel, the flow of oil through the adjustable spout being controlled by the thumb button and the quantity of oil being shown by the float indicator. The capacity is 2 gal., and the construction is galvanized iron. Price \$8.—Weaver Mfg. Co., Springfield, Ill.

### PREST-O-GRIP CHAINS FOR ARTILLERY WHEELS

Both ends of the chain are hooked to a clamp which grips every other spoke, the clamps being attached to the spokes with wing nuts, hexagon nuts or square nuts as desired. The chains snap on and off easily but will not come off in service. Prices range from \$17.60 to \$30.95 per complete set according to size, type of wheel and other details.—Rowe Calk and Chain Co., Plantsville, Conn.

### LETT'S MANIFOLD HEATER FOR FORDS

This is an intake-manifold heater for Fords, the heating being done by the exhaust gas. The exhaust manifold is tapped and a portion of the gas goes through a piece of flexible tubing to a chamber which surrounds the intake manifold, and

from there it is piped off by another flexible tube. The chamber is in two parts, bolting around the manifold so that it can be taken apart for cleaning. Can be attached in a short time without machine work. Price \$6.—Hill-Smith Metal Goods Co., 82 Brookline Avenue, Boston.

### KING SAFETY TAIL LIGHT

This is a tail lamp that has in addition to the red lens a white lens with a separate bulb and a reflector which throws a beam of white light 50 ft. back of the car and about the width of a road. It is used for backing into dark places and garages. Made of cold-rolled steel and finished in black enamel. Furnished complete with bulbs, bracket to fit any car and a switch. Price \$6.—King-Bull Mfg. Co., 123 East Ontario Street, Chicago.

### SEE-SAFE WINDSHIELD WIPER

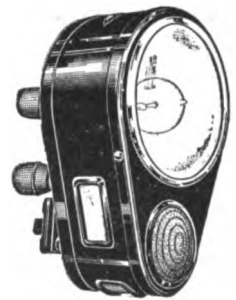
This is a windshield wiper consisting of an arm with a squeegee which goes on the front of the shield, this arm extending over the top of the shield and ending in a handhold and roller which provide the means of moving the squeegee and forcing it firmly against the glass. Price 50 cents.—Stadeker Metal Specialty Co., 358 West Madison Street, Chicago.

### BOSCH LOOP TERMINAL

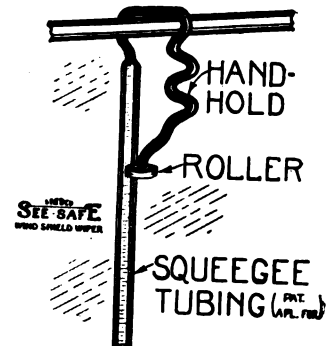
This is a piece of straight brass tubing  $1\frac{1}{2}$  in. long, which is slipped over the bared strands of wire and then pushed under the insulation. The tube with the wire inside is then bent to a loop. Price 3 cents each.—Bosch Magneto Co., 223-225 West Forty-Sixth Street, New York City.

### BELL GREASE GUN

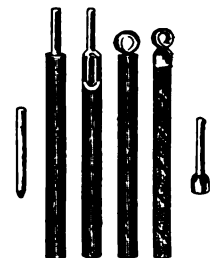
This is a grease gun with a screw-operated expanding plunger to prevent the grease working back. It is fitted with a reversed leather which has sufficient suction to draw light oils up to No. 2 grease. It is finished rust-proof and has two spouts. Eight oz. size \$2.25, 5-oz. size \$2.—Bell Pump & Mfg. Co., 74-78 Fort Street, East Detroit.



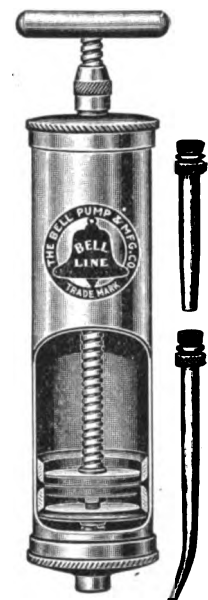
King Tail Light



See-Safe Windshield Wiper



Bosch Loop Terminals



Bell Grease Gun



## NECESSITY CHAIN TOOL

This is a tool for opening and closing the links of tire chains. It brings a powerful leverage to bear on the link, forcing the end link open easily or pressing it to the exact center of the other links. Price \$1.50. Packed 12 in a box.—Stevens & Co., 375 Broadway, New York City.

## JEAVONS SPRING LUBRICATORS AND COVER

This is a cover to protect the spring from dirt, dust and water, inside of which is laced fabric which acts as the oil conveyor from the oil-feed cap to the leaves of the spring. One cover is required for each section of spring between the spring support or axle and the hanger bolt. Made in different sizes for different cars and trucks.—A. N. Jeavons, 1603 Prospect Avenue, Cleveland.

## PECK'S SUPER-HEAT MANIFOLD FOR FORDS

This is a one-piece casting combining the intake and exhaust manifold to replace the separate manifolds on the Ford. The hot wall of the exhaust portion heats the mixture in the intake portion, more thoroughly vaporizing it. It can be attached by simply removing the old manifolds and carburetor and attaching the new. No machine work is necessary and the same studs and bolts hold it in place. Price \$9.—Peck's Super Heat Co., Elkhart, Ind.

## PETRY COWL VENTILATOR FOR FORDS

This is an adjustable cowl ventilator for Fords. It is attached by cutting a hole in the metal cowl. The baffle plate and sides form a scoop which catches and throws the air on the floor. It is water and dust proof when closed. Price \$3.—N. A. Petry Co., Inc., 1307 Race Street, Philadelphia.

## HOUSE WIRE WHEELS FOR FORDS

This is a set of wire wheels for Fords in which the inner hub has 10 tapered serrations that fit into and grip the corrugations inside the hub shell. A mechanical latch locks the parts together when the wrench is taken off the hub and is released when the wrench is put on. The set consists of 5 wheels, 4 inner hubs, 4 hub caps, dust cover for spare wheel, wrench for hub caps and another for the spoke nipples. Price \$65 per set.—Wire Wheel Corp. of America, 1700 Elmwood Avenue, Buffalo, N. Y.

## PERMALIFE STORAGE BATTERIES

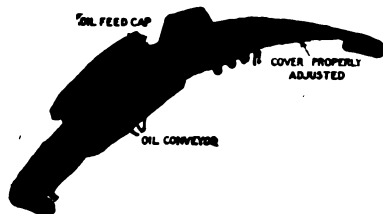
These batteries are made in a variety of sizes, shapes and capacities for starting, lighting and ignition, and among other features, it is claimed that they

## SELL TRUCK ACCESSORIES

Motor truck purchasers furnish a fertile field for accessory sales, in the opinion of the Wisconsin Auto Exchange & Supply Co., Milwaukee. A live-wire salesman can suggest many devices to the truck owner which will promote efficiency and comfort and give the driver fewer excuses to offer.



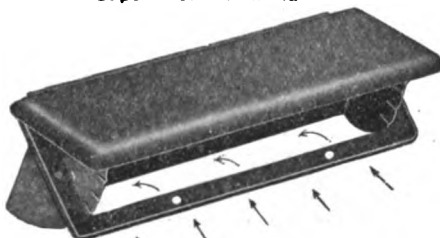
Necessity Chain Tool



Jeavons Spring Lubricator



Super-Heat Manifold



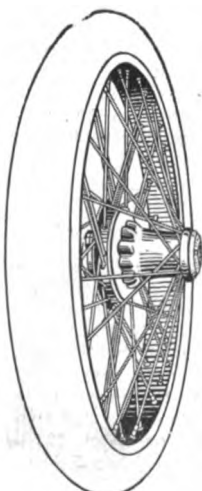
Petry Cowl Ventilator



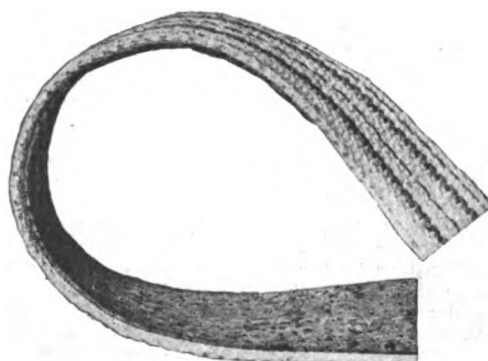
Stevens Carburetor Wrench and Grinding Pin



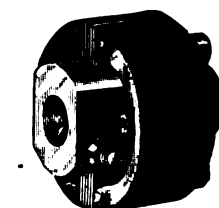
Jasco Seamless Tanks



House Wire Wheel



Sure-Hold Transmission Lining



Bosch Flexible Coupling



Bosch Terminal Tool



Bell Oil Gun

are non-sulphating, the plates are not liable to buckle, the internal resistance is low and the discharge rate is high. Prices range from \$28.50 to \$61.25.—Permalife Storage Battery Co., Poughkeepsie, N. Y.

## BOSCH FLEXIBLE MAGNETO COUPLING

This is a flexible magneto coupling, the driving member bearing a steel leaf spring fitting into a fiber-lined slot on the magneto member. It is so made that the magneto may be easily removed. Price \$6 for plain type, \$7.50 for adjustable type.—Bosch Magneto Co., 223-225 West Forty-sixth Street, New York City.

## BOSCH TERMINAL TOOL

This is a tool for attaching terminals to both high and low-tension cables. The insulation is stripped, the terminal slipped in place and the loop formed, all with the use of the tool. Price \$20.—Bosch Magneto Co., 223-225 West Forty-sixth Street, New York City.

## BELL OIL GUN

This is an oil gun with a cylinder 8 x 1 1/4 in., fitted with an expansion plunger to prevent the oil working back. It may also be used for light grease. Furnished with rust-proof finish and with two spouts. Price \$1.—Bell Pump & Mfg. Co., 74-78 Fort Street, East Detroit.

## STEVENS CARBURETOR WRENCH AND GRINDING PIN

These are tools for carburetors of the Schebler type. The wrench has two sockets of different sizes for adjusting the float valve and the grinding pin has a chuck for holding the valve while grinding it to a better seat. Wrench and chuck packed together in an envelope. Price 40 cents.—Stevens & Co., 375 Broadway, New York City.

## JASCO SEAMLESS TANKS

These are seamless steel tanks for gasoline, kerosene or oil. They are furnished tene coated and in diameters from 4 to 24 in., and any length desired. There are three places for connection, outlet, filling plug and air.—Janney, Steinmetz & Co., Morris Bldg., Philadelphia, Pa.

## SURE-HOLD TRANSMISSION LININGS FOR FORDS

These linings are made with a facing of tough, dense cork, this facing being cemented on a strong duck backing and the combination sewed on a soft cotton brake lining. The cork surface alone comes in contact with the drums. Packed three pieces the correct size in a box complete with brass rivets. Price \$2.50.—Right Motor Specialties Co., 1326 Michigan Avenue, Chicago.

**BRAENDER SUPER-CORD TIRES AND TUBES**

Braender Super-Cord Non-Skid casings combine the rib and non-skid features so that it can be used on either front or rear wheels of cars or trucks. Prices are: 36 x 6 in. \$109.45, 38 x 7 in. \$154.75, 40 x 8 in. \$199.45. Red tubes are respectively \$18.15, \$23.80 and \$30.75.—Braender Rubber & Tire Co., Rutherford, N. J.

**PIONEER GREASE AND OIL GUN**

This is a combination gun that will operate with light oil or grease. The swivel ball joint permits the nozzle to be turned in any direction and the knurled collar at the ball joint is unscrewed to load the gun quickly. Overall length 15 in. Price \$1.50. Packed 1 in a box.—Stevens & Co., 375 Broadway, New York City.

**MOSSBERG NO. 4 WRENCH SET**

This is a set of 9 double-end wrenches fitting all S. A. E. and U. S. Std. sizes from 1/4 to 3/4-in. screw diameters. Packed in a natural wood box with sliding cover. Price \$3.90 semi-finished, \$4.91 finished, \$5.84 full finished.—Frank Mossberg Co., Attleboro, Mass.

**BOWER ROLLER BEARING**

This is a combined radial and thrust roller bearing, the radial load being taken by the cylindrical part of the bearing and the thrust being taken by the flanged heads. Made in all sizes in both inch and metric measurements. Prices range from \$4.95 to \$74.—Bower Roller Bearing Co., Detroit.

**MAGNET RECHARGER FOR FORDS**

This is a portable electromagnet for remagnetizing the magnets of the Ford magneto without removing them from the fly-wheel. It operates from 6-volt storage batteries or dry cells. It consists of 2 electromagnets mounted on a pole piece, the whole being attached to a wooden handle, and provided with a cord connection to go to the battery.—Midway Mechanical Co., St. Paul, Minn.

**ADVANCE FELT WASHERS AND GASKETS FOR FORDS**

There are two sets, No. 1 being a complete assortment of washers and gaskets and the No. 2 being an assortment of felt washers only. The number of each washer and gasket corresponds to the Ford catalog number.—Advance Felt Specialty & Cutting Co., 322 South Jefferson Street, Chicago.

**ADVERTISES ITS PRIORITY**

The Clover Mfg. Co., Norwalk, Conn., which manufactures a grinding compound, is filling contracts for the United States, Canada, England and France and considers its product decidedly an essential product, especially as 81.2 per cent of last month's production was for the four governments mentioned.

At the exhibition of trucks, tractors and accessories on the Municipal Pier at Chicago it advertised "A Suggestion to Accessory Dealers."

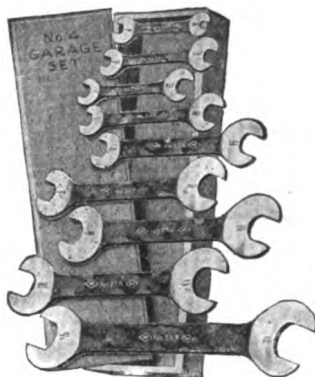
"The Government will limit your operations to the essential articles which you sell."

"The choice of essential articles is, therefore, essential for your existence."

"Clover Compound is on the priority list. Priority No. 11311. A word to the wise is sufficient."



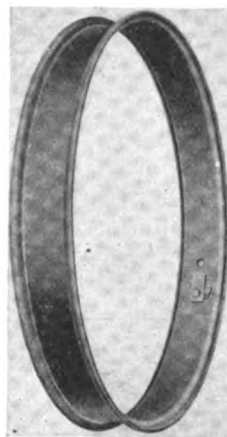
Pioneer Grease and Oil Gun



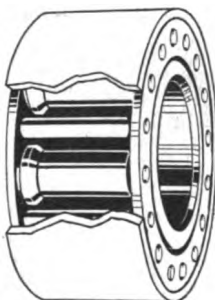
Mossberg No. 4 Wrench Set



Vulcan Fan Belt



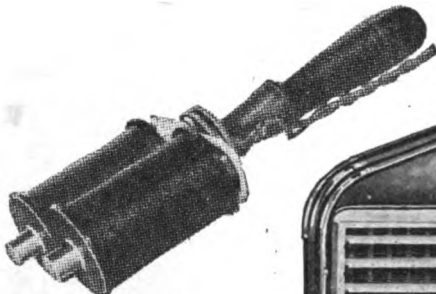
Jaxon Rim



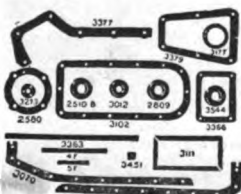
Bower Bearing



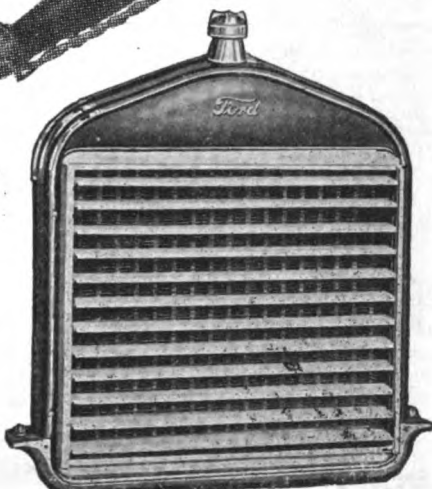
Ter-We-Do Mud Shoe



Magnet Recharger



Advance Washers and Gaskets



Universal Radiator Shutter

**RUBY FLUID SOLDERING AND TINNING FLUX**

This is a non-rusting and non-corroding soldering and tinning flux for brass, steel and copper. It is not poisonous, and is packed in tin cans. Price, pints 40 cents, quarts 65 cents, half-gallons 90 cents, gallons \$1.60, 5-gal. \$7.55, 10-gal. \$14.50.—Ruby Chemical Co., Columbus, Ohio.

**JAXON DIAGONAL SPLIT RIM**

This is the standardized diagonal split rim which has been adopted by several big makers. It is made in all standard sizes for passenger cars. The split is locked by a clamp and dowel.—Jaxon Steel Products Co., Detroit.

**VULCAN FAN BELT**

This is a belt with a special surface to prevent slipping. Made in either endless or detachable style.—Advance Packing & Supply Co., 13-15 North Franklin Street, Chicago.

**HOWARD DUSTLESS DUSTER**

This is a dust cloth which is chemically treated to retain the dust and polish the surface of windshields, upholstery and body parts. To remove the accumulated dust from the cloth it is only necessary to wash it. Price 50 cents.—Howard Dustless-Duster Co., 261 Franklin Street, Boston.

**TER-WE-DO MUD AND SNOW SHOE**

This is a shoe which is buckled over the tire and felloe, there being 14 in. of flange on each shoe to take hold on the mud or snow. Made of 12 gage cold-rolled steel. Two shoes to a set for each rear wheel. Price \$3.50 per set of 4.—Nelson-Bacon Mfg. Co., Oshkosh, Wis.

**SERVICE GOGGLES**

These goggles are for shop use and are made with Para rubber fitted with large oval or round glasses either clear, smoke or amber. The fastener is adjustable and the lenses will not drop out, but can be easily renewed.—American Spectacle Co., 47 West Thirty-Fourth Street, New York City.

**UNIVERSAL RADIATOR SHUTTER FOR FORDS**

This device is made up of a number of shutters carried on a frame of such size as to completely cover up the opening of the Ford radiator. The shutters are movable and are controlled from the steering column. The entire mechanism is sheet metal. Price \$7.50.—Metal Auto Parts Co., Des Moines, Ia.

# Some of the Most Modern



*These pictures are from the new store of the Martin-Evans Co., Brooklyn, N. Y.*

*All goods are behind glass cases. The hammers are on special racks so that all are visible to the prospective buyer*

*The doors to the drawer compartments are of glass. Behind the glass, affixed to the doors, are samples of everything that is in the drawer's behind the doors*



*The Martin-Evans Co. recently moved into this 5-story building at Bergen street and Bedford avenue, one of the most conspicuous corners in Brooklyn. Thousands of people pass every 24 hours*



*Here's how it works: A customer says: "I like that screwdriver," pointing to one that is displayed in one of the glass-faced doors. Whereupon the salesman opens the door and from the stock drawer behind it takes out the article itself and places it in the customer's hands*

# Display Ideas in America



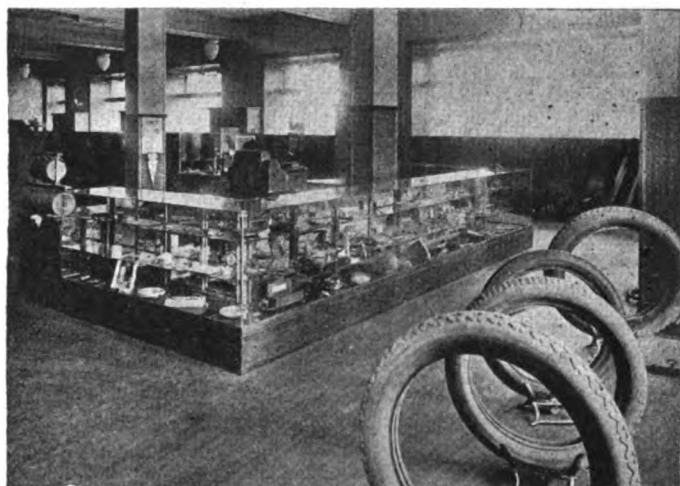
*When goods are sold they are wrapped at this counter, which is connected to the offices upstairs by a pneumatic tube cash carrier system*



*The aisles are used to display heavy garage equipment, for the company annually sells thousands of dollars of goods to the retail trade*



*When you enter the front door this is the way the above store looks, provided you can get your head this high. Light, clean and modern, isn't it?*



*This wonderful display hits the eye as you walk in the door and begin to wander around. It is filled with seasonable goods. It sells them*

*And when you climb the stairs to the general offices you find a telephone operator the first thing. If you want to see Del Martin she takes you to the far corner, through the open door, at the right of the center post*



*And if you are a stenographer in these offices you will find a nice rest room over in the right-hand corner, and when it comes time for lunch you can hook up an electric percolator and brew coffee that makes a mere restaurant a delusion*



**RAYFIELD THERMOSTAT**

This is a device connected into the water-circulation system which automatically controls the flow of the water to maintain a constant temperature. When the water is cool, it is directed through a by-pass around the radiator and when it is hot, it is sent through the radiator. The style for thermo-syphon systems has no by-pass. The device is connected into the hose line. Price \$17.50 for pump systems, \$15 for thermo-syphon systems.—Finselsen & Kropf Mfg. Co., Twenty-first and Rockwell Streets, Chicago.



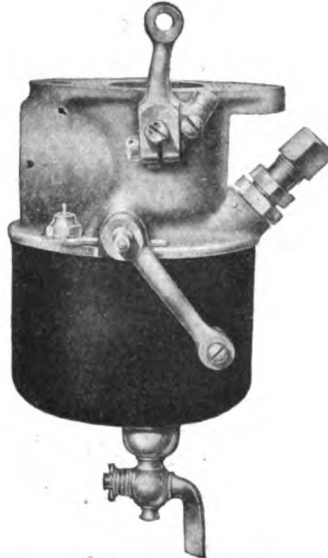
Rayfield Thermostat

**FROST KING RADIATOR AND HOOD COVER**

This is a 3-ply radiator and hood cover with a curtain in front which may be rolled up and fastened. The outer ply is imitation leather, the inner kersey and the intermediate is asbestos. Prices \$3 to \$14.—Cincinnati Auto Specialty Co., 426 Elm Street, Cincinnati, Ohio.

**THE CARTER CARBURETER**

Models H and L are similar in construction, Model H having a vertical outlet and Model L having a side outlet. The carbureter is designed for small-bore 4-cylinder engines, the low speed mixture coming from a hole above the throttle and the high speed from a hole in the jet tube. Price \$17 for Model H, \$19 for Model L.—Carter Carbureter Co., St. Louis, Mo.



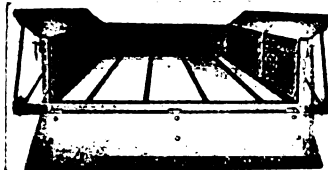
Carter Carbureter

**NORMA BALL BEARINGS**

These ball bearings are made especially for magnetos and lighting generators. They are of open type, and have separable mountings. Made in a wide variety of sizes for the work for which they are intended.—Norma Co. of America, 1790 Broadway, New York City.

**AMESBILT COMMERCIAL BODY**

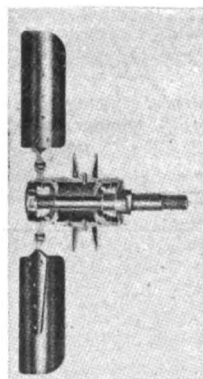
This is a commercial body in the white. The loading space is 102 x 46 x 12 in. The flare-boards are 7 in. Shipping weight 500 lb. Price \$63.—F. A. Ames Co., Inc., Owensboro, Ky.



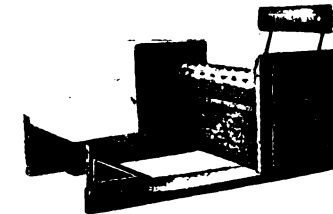
Amesbilt Body

**OAKES PRESSED-STEEL FAN**

This is a spindle-driven pressed-steel cooling fan with enclosed bearings and a large reservoir for lubricant. It can be had in a number of modified forms, including flat or V-belt, either direction of rotation, any diameter, and with either fixed or rotating shaft.—Oakes Co., Indianapolis.



Oakes Fan



Ames Cab Seat

**AMES CAB SEAT FOR CONVERTED TRUCK**

This is an open cab seat for any convertible truck. It is painted Brewster green, striped. Shipping weight 125 lb. Price \$18.—F. A. Ames Co., Inc., Owensboro, Ky.

**BURLINGTON TRUCK UNIT**

This is an internal-gear-drive truck unit for converting passenger cars into trucks. It has semi-elliptic springs with an auxiliary cross spring. Five points of attachment to the front of the passenger car are provided, the ends of the frame, the brake rods and the propeller shaft. Price \$425.—Burlington Motor Truck Co., Burlington, Wis.



Burlington Truck Unit

**PARKER TRANSMISSION GREASE**

This is a grease prepared for gear seats, differentials, timing gears, ball and roller bearings, etc. It is claimed that it will neither run out in warm weather nor cake in cold weather. Packed in barrels, half-barrels, 100-lb. kegs, 25 and 50-lb. cans.—Parker Refining Co., Cleveland.

**ERDMAN-GUIDER TOP FOR CADILLACS**

This is a winter top for the 1917-1918 Cadillac. It is built with steel sides and agasote roof and has a 3-piece ventilating windshield. Trimming is in Bedford cloth and plate glass is used throughout. Doors open like a limousine door.—Erdman-Gulder Co., 2290 Woodward Avenue, Detroit.



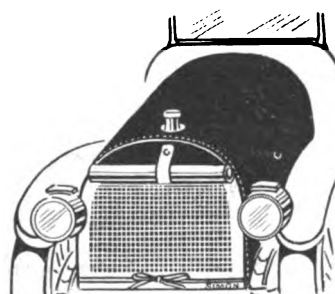
Erdman-Gulder Top for Cadillac

**SCHLEBLER MODEL L CARBURETER FOR FORDS**

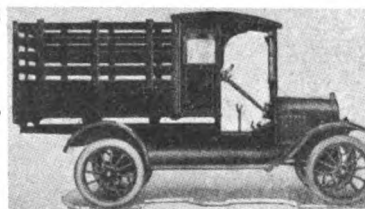
This Schlebler model is made to fit the Ford car when the special manifold is used. It has low throttling power and quick pick-up. Price \$15.—Wheeler & Schlebler, Indianapolis.

**SIMON HOOD AND RADIATOR COVERS**

These hood and radiator covers are adjustable and can be used on different cars which are nearly the same size. The No. 74 can be used on the Maxwell, Chevrolet, Dodge, Rush, Metz, Dort, Vim and some others. Made of heavy kersey lining with waterproof cover. Price \$3.90.—S. C. Simon & Co., 404-412 Brown Street, Philadelphia.



Simon Radiator Cover



McIntyre Convertible Body

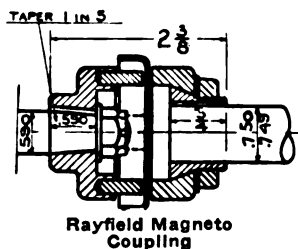
**CONVERTIBLE FARM AND STOCK BODY FOR FORDS**

This body has a grain-tight floor and a removable stock rack. The loose grain capacity to the flareboards is 23 bu. The loading space back of the seat is 70 in. long, 60 in. wide and the side panels are 12 in. high. It is ironed and braced and has a full-width end gate with chains. Price \$73.50.—McIntyre Motor Products Co., 100-110 West Fifty-fifth Street, Chicago.

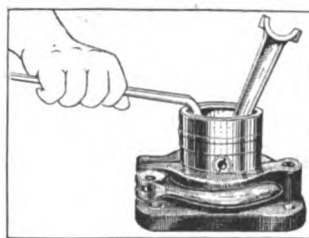


**RAYFIELD MAGNETO COUPLING**

This is a flexible magneto coupling in which any backlash is taken up by springs. A setting device consisting of an inside and outside cone allows for setting the magneto without disconnecting the coupling. Price \$2.50.—George D. Bailey Co., 4500-4508 Ravenswood Avenue, Chicago.



Rayfield Magneto Coupling



Storm Piston Vise

tric Specialty Co., 118-124 Clinton Street, Chicago.

**STORM PISTON VISE FOR FORDS**

This is a quick-action vise for Ford pistons, the jaws being the exact size of the piston and lined with soft metal. Adjustment can be easily made for oversizes. Price \$10.—Storm Mfg. Co., Thompson, Iowa.

**TRIPLEXD GASOLINE HOSE**

This is a fabric-covered flexible-metal hose, the fabric being woven on a layer of rubber under pressure, this pressure forcing the rubber tight against the metal lining. Made in sizes from 1/2 to 3-in. inside diameter, prices ranging from 70 cents per ft. for the 1/2-in. to \$6 per ft. for the 3-in. Couplings with standard pipe threads cost from \$2 to \$20.—Metal Hose & Tubing Co., Brooklyn, N. Y.



Triplexd Hose



Harrison Shutter Radiator



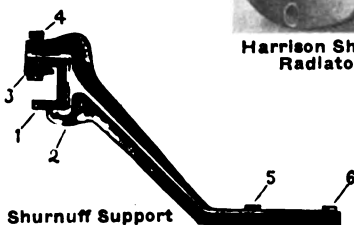
Auxiliary Radius Rod

**AUXILIARY RADIUS ROD FOR FORDS**

This is an auxiliary radius rod for Fords, the front ends clamping under the heads of the spring-hanger bolts and the rear point clamped to the regular rod. Made either of 1-in. angle iron or 3/4-in. round tubing. Price \$2.—Staff & Eckhouse, 1432 South Michigan Avenue, Chicago.

**SHURNUFF RUNNING-BOARD AND FENDER SUPPORT FOR FORDS**

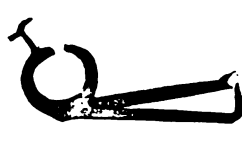
This is an arm with a clamp at one end which clamps around the side-member of the frame, the other end being bolted under the running-board where it joins the front fender. Can be attached quickly without drilling holes or other machine work. Price \$4.50 per pair.—Shurnuff Mfg. Co., St. Louis, Mo.



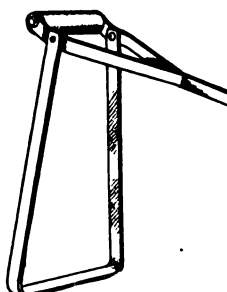
Shurnuff Support



Re-Carburetor



Marquette Tire Tool



Tire Saver Jack

**TIRE-SAVER JACK FOR FORDS, ETC.**

This is a tire saver jack for the Ford, Chevrolet, Maxwell or any car with 30-in. tires. It is made of steel, has a rubber roll to protect the hub and has a quick-acting lever.—Staff & Eckhouse, 1432 South Michigan Avenue, Chicago.

**WALDEN NO. 30 GARAGE SERVICE WRENCH SET**

This is a set of 30 wrenches including 10 speed wrenches, double socket wrenches and other tools. They fit almost every bolt and nut on the Ford, Buick, Reo, Chalmers, Dodge, Maxwell, Cadillac, Chevrolet, Haynes, Hudson, Studebaker, Overland, Packard, Paige and Oldsmobile. Price \$20.—Walden-Worcester, Inc., Worcester, Mass.

**THE RE-CARBURETOR**

This is a small cup screwed into the intake manifold to mix air with the mixture. It can also be used as a primer. Price \$4. A steam-inductor attachment for taking water from the radiator and turning it through the re-carburetor as steam is \$2.—John M. Kelley, 80 North Water Street, Rochester, N. Y.



Allen Radiator Cover



Rayfield Carburetor



Autoreel Lite

**HARRISON AUTOMATICALLY CONTROLLED SHUTTER RADIATOR**

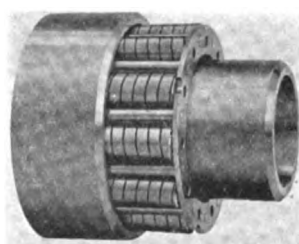
The hexagon cellular radiator is provided with a set of shutters like Venetian blinds, which are automatically opened and closed by a thermostat to admit the necessary amount of air to keep the cooling water at 180 deg. Fahr.—Harrison Radiator Corp., Lockport, N. Y.

**ALLEN RADIATOR COVER**

This is a radiator cover with a quick adjustable flap which can be fastened with ball-and-socket fasteners to any degree of opening. It is made of fabric leather with moleskin backing. Price \$8.—Allen Auto Specialty Co., 16-24 West Sixty-first Street, New York City.



Esta Auxiliator



Hyatt Roller Bearing

**HYATT ROLLER BEARINGS**

These are flexible roller bearings for radial loads only. They require no adjustment, as the spring of the spiral roller eliminates the necessity for adjustment and at the same time distributes the lubricant. Made in all sizes for car, truck or tractor use.—Hyatt Roller Bearing Co., Detroit, Mich.

**RUSCO TRANSMISSION LINING SETS FOR FORDS**

Three pieces of the lining cut the correct length for the Ford transmission are packed in a box with the necessary copper rivets. The lining is long-fiber asbestos without wire insertion and it is treated with a compound to prevent damage from the hot oil.—Russell Mfg. Co., Middletown, Conn.

**ESTA WATER AUXILIATOR**

This is a device to feed moist air to the intake manifold for the purpose of reducing carbon deposit and decreasing the fuel consumption. A small aluminum tank fastened to the front of the dash holds the water, and air is drawn through the water. The then moistened air goes from the tank through a tube to the intake manifold. Price \$15.—Esta Co., 103-107 Massachusetts Avenue, Boston.

clinch rim to act as a fulcrum for the hook on the other handle, which is hooked and pulls the tire off. Price \$2.75. Each tool in an individual box, 12 boxes to a carton.—Marquette Mfg. Co., Inc., St. Paul, Minn.

**RAYFIELD MODEL O CAR-BURETER**

This is a plain-tube carbureter with no moving parts and is designed for motor-truck and tractor work. The float chamber is concentric with the venturi tube. For ordinary running fuel is supplied direct from the reservoir, while for accelerating, additional fuel is

taken from the nozzle well.—Findelsen & Kropf Mfg. Co., Twenty-first and Rockwell Streets, Chicago.

**ANDERSON AUTOREELITE**

This is a combined spot and trouble lamp, the cord being wound on a reel in the ball casing just back of the lamp. The cord pulls out when the lamp is used as a trouble lamp, and winds up by a spring like a window shade when the lamp is replaced. Three clamps are provided with each lamp, so that any style of shield can be made use of. Prices \$7.50 to \$9 for the Model B, which is 6 in. in diameter.—Anderson Elec-

**MARQUETTE TIRE TOOL**

This is a tire tool for removing and replacing clincher tires rapidly. The two jaws are closed by pressing the handles together and one handle is placed on the

**FIRE-GUN EXTINGUISHER**

This is a hand pump extinguisher which discharges its liquid in a straight line from the bottom of the device. It holds 1½ qt. of liquid, which is claimed to be non-freezing, a non-conductor of electricity and not to damage machinery of delicate fabrics. No. 1 size \$12; No. 2 size \$16.—Fire Gun Mfg. Co., 115-119 Fourth Avenue, New York City.

**OUTLOOK WINDSHIELD CLEANER**

This is a squeegee windshield cleaner, the rubber strip on the outside of the glass being held in close contact by means of a spring arm with a rubber roller on the inside. For touring cars, the device goes over the frame of the shield. For closed cars, a hole is drilled in the glass. Price \$1.50.—Outlook Co., Cleveland, Ohio.

**HEINZE-SPRINGFIELD ELECTRICAL SYSTEM FOR FORDS**

A two-unit, 6-volt single wire starting and lighting system with Bendix drive. The outfit consists of mounting plate, motor and generator assembly, silent chain drive, switch assembly, battery and box, wiring assembly and rear light. Price \$100.—The John O. Heinze Co., Springfield, Ohio.

**HOLOPHANE LENS**

This is a lens designed to eliminate glare and throw the rays downward on the road. A fin prevents glare by shielding the filament. Price \$2.75 to \$4 per pair, depending on size.—Holophane Co., 340 Madison Avenue, New York City.

**BULLER AUTOMATIC COUPLER**

This coupler is made for use on any type of car, truck or tractor. It consists of two jaws, a spring and a locking block. When the load is coupled on, it closes the jaws on the outside and opens them on the inside, the locking block making uncoupling impossible. Price \$12.—Buller Coupler Co., Hillsboro, Kansas.

**APCO WATERSHED FOR FORDS**

A device designed to protect the ignition wiring and to prevent water from dripping on the coil and spark plug wires. Price \$1.—Apco Mfg. Co., Providence, R. I.

**CHAMPION SHOCK ABSORBER FOR FORDS**

A shock absorber in which the pivot seat of the two coil springs acts as a spindle, allows free oscillation and absorbs road shocks by acting in conjunction

with the flexing of the regular spring system. Price \$15 per set of four or \$8 for two rear wheels.—Champion Shock Absorber Sales Co., 918 N. Senate Avenue, Indianapolis.

**BB AUTO-POWER PULLEY**

This is a pulley which is attached to the rear wheel of any kind of car, the wheel being free to turn when it is jacked up. The pulley is attached by removing the hub cap. Price \$5.65.—Bayne Mfg. Co., Bushnell, Ill.

**OHIO KARBON KILLER**

This is a compound which is dissolved in the gasoline in the tank in the proportions of a level teaspoonful to 5 gal. of gasoline. It is claimed to prevent the formation of new carbon and to remove the carbon already in the cylinders. Price \$1 per can, which contains sufficient to treat 480 gal. of gasoline.—Ohio Grease Co., Loudonville, Ohio.

**ANCHOR TOPS FOR WINTER**

These glass-enclosed tops are made for various cars and are supplied complete with irons for attaching. They are made of hardwood reinforced with pressed steel and the top decks are finished in waterproof material with a lustre. Prices range from \$77.50 for the Ford roadster top to \$250.—Anchor Top & Body Co., Cincinnati, Ohio.

**BEHLEN FOUR-WHEEL-STEER TRAILER**

This is of steel construction throughout, with the exception of the platform which is of hardwood. The four-wheel-steer insures accurate tracking and the wheels run on caged roller bearings. Capacity is 5000 lb., weight is 400 lb. and price is \$100.—Chas. Behlen Sons Co., Vine & 15th Streets, Cincinnati.

**UTILITY HEATER**

This is a foot-rail heater in which the exhaust gas heats the foot rail which is covered with a grating. A regulating valve permits regulation of the temperature. One model heats all cars except the Ford. Price \$15; front-seat heater, \$10; heater for Fords, \$7.50.—Hill Pump Valve Co., Archer Avenue, Canal and Twenty-third Streets.

**PERMA-LOC BLOWOUT PATCH**

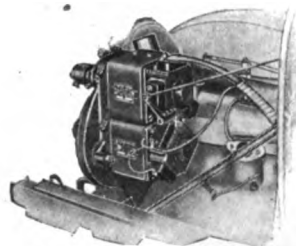
This is a blowout patch for either cord or fabric tires. It is flexible and has large flaps. Made in 3, 3½, 4, 4½ and 5-in. sizes.—Perma-Loc Mfg. Co., Scranton, Pa.

**FOSTER REPAIR CREEPER**

This is a repair creeper with a link fabric spring and a cotton-filled pillow. It is mounted on ball-bearing castors and has an anchor to hold it in any position. Price \$4.—Foster Bros. Mfg. Co., Utica, N. Y.



Fire-Gun Extinguisher



Heinze-Springfield System



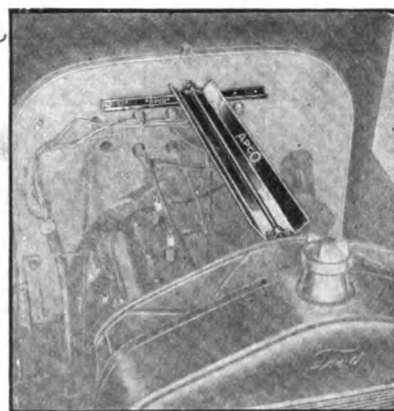
Holophane Lens



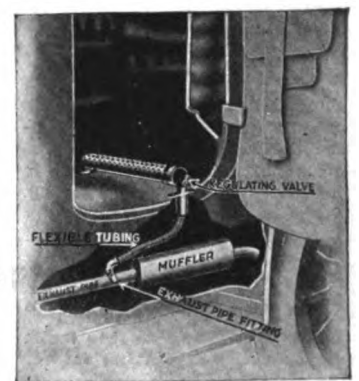
BB Power Pulley



Foster Creeper



Apco Watershed



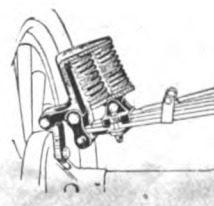
Utility Heater



Outlook Windshield Cleaner



Buller Coupler

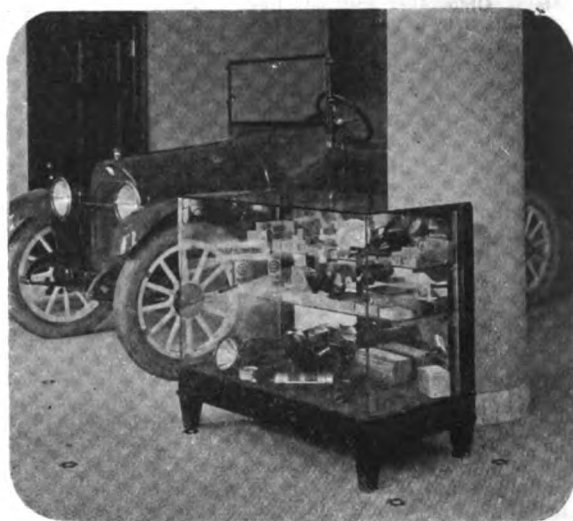
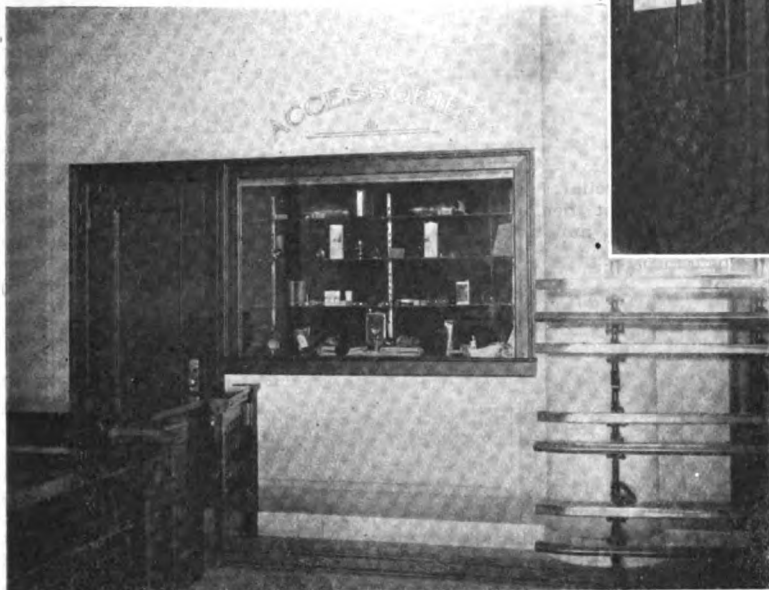


Champion Shock Absorber



Anchor Top

## Show Cases Sold \$20,000 Accessories in One Year



Russell P. Taber, Inc., selling Reo cars and trucks and other things in Hartford, Conn., started with nothing about ten years ago and has made a lot of money through intensive merchandising. For example: He put in his sales-room the little show case shown at the right. It brought some business, but not a great deal. He then put a show case, shown at the upper right, in the service station where folks simply had to see it. It sold \$20,000 worth in 12 months. He has now added the show case in the picture at the left. It is on the first floor of the service station and is already producing. That's about the whole story, except—Taber expects to get by this winter and be here when the war has been won



## And Here Is Another

Smith's Garage in Big Sandy, Mont., isn't passing up any bets. It sells accessories. It also lets the public know it has them to sell. See the neat show case, the bumper rack, the display fixture on the counter and the generally attractive appearance of the whole place. Better give an imitation of this man Smith, fellows. He's another of these "get by" lads

**MUNGER PISTON RING**

A one-piece concentric ring having a joint made by a double cut so that the contact surfaces of the ends are at an angle to the side of the ring. This permits the joint to remain tight after the ring has worn and the ends have separated slightly.—Splitdorf Electrical Co., Newark, N. J.

**H & M PISTON RING**

A one-piece eccentric ring with a 45-deg. diagonal split, cast of Virago metal by a special process and finished to the closest limits practicable.—H. & M. Auto Parts Co., Cambridge City, Ind.

**WRIGHT PISTON RING**

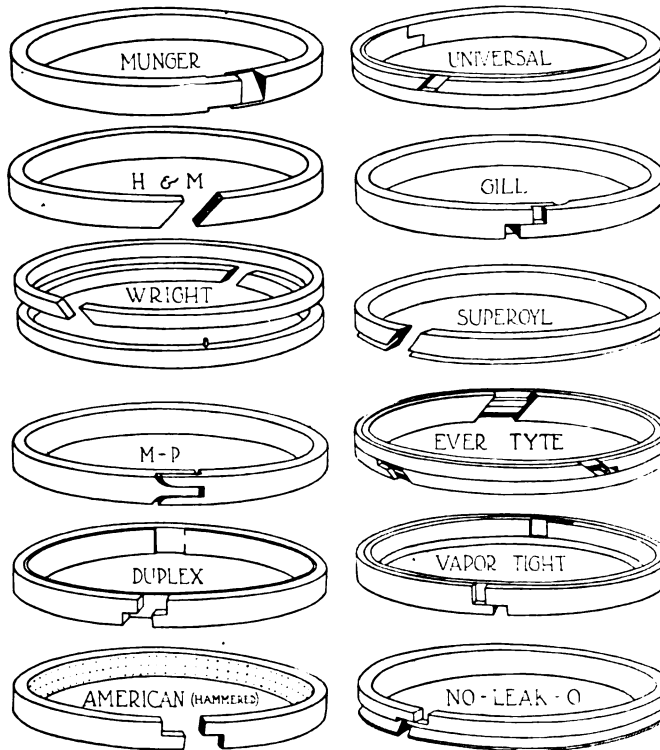
A two-piece concentric ring in which one part is so placed over the other that the diagonal slots are retained at directly opposite points of the circumference. Made of fine gray iron and machined accurately.—V. A. Longaker Co., 448 North Capitol Avenue, Indianapolis.

**M.P. PISTON RING**

A one-piece concentric ring having a joint overlapping both horizontally and vertically. The inside of one of the ends is milled half way and a slot is cut in the remaining tongue.—Metal Products Co., 3205 S. Broadway, St. Louis.

**DUPLEX PISTON RING**

A two-piece concentric ring consisting of a conventional cast-iron snap ring with stepped joint and an inner guard ring of spring steel. An arrangement of tongue and recess closes the opening in the outer ring and prevents the slots from coming



together.—The Piston Ring Co., Muskegon, Mich.

**McQUAY-NORRIS SUPEROYL RING**

A concentric ring provided with a reservoir which collects excess oil from the cylinder walls on the down-stroke of piston. Reservoir is cut in the bottom of the ring at an angle of 45 deg. from the inner section of the cylinder-wall bearing face of the ring. Intended for use in top groove with Leak-

Proof rings in the other grooves. Made in all sizes.—McQuay-Norris Mfg. Co., St. Louis.

**NO-LEAK-O PISTON RING**

A one-piece concentric ring with step joint and oil-sealing groove machined around its circumference. Lubricant is held in this groove, preventing the escape of gasoline mixture and the access of surplus oil. Made in all sizes.—Automobile Accessories Co., 824 N. Avenue, Baltimore.

**AMERICAN PISTON RING**

A one-piece concentric ring hammered or peened on the inside and having a stepped joint. Peening is done to insure absolutely equal resiliency or spring throughout the circumference of the ring. American Piston Ring Sales Co., Newark, N. J.

**UNIVERSAL PISTON RING**

A two-piece eccentric ring made up of duplicate eccentric rings fitted together in concentric form by cutting down part of each to one-half its original thickness.—Albany Hardware Specialty Mfg. Co., Albany, Wis.

**GILL PISTON RING**

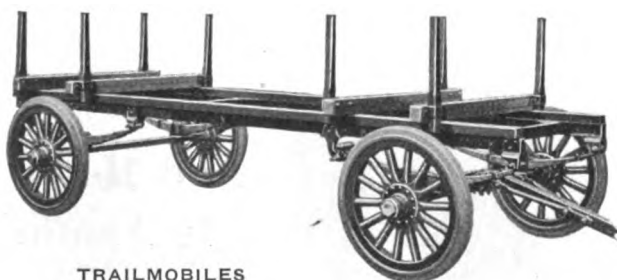
A one-piece concentric ring having a stepped joint which overlaps both vertically and horizontally and designed to prevent the escape of compression or the passage of oil into the combustion chamber. Price from \$1 up.—Gill Mfg. Co., 351-359 West 59th Street, Chicago.

**EVER-TYTE PISTON RING**

A three-piece ring with right angle interlock and 3-point radial expansion designed to insure a perfectly circular ring and consequent uniform pressure against the cylinder walls. Price for Ford engines \$1; other sizes from \$1.25 up.—Ever Tight Piston Ring Co., St. Louis.

**VAPOR TIGHT PISTON RING**

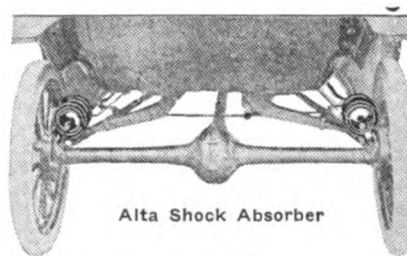
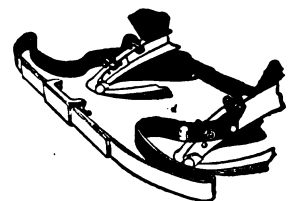
A two-piece concentric ring having a stepped slot in the outer member and a split radius on the other, so formed that the two lips will meet each other irrespective of position. The slots in the two parts are diametrically opposite.—Baker Valve Co., Minneapolis.

**TRAILMOBILES**

These are 4-wheel trailers furnished in four models with respective load capacities of 1250, 1500, 2000 and 3000 lb. Prices are \$248, \$305, \$327 and \$550 for the chassis. Square axles of ample dimensions are used and solid rubber tires of suitable section are fitted. Bodies of many types are listed.—The Trailmobile Co., Cincinnati.

**NISWANDER RIM REMOVER**

A tool for removing demountable rims. Operates by contracting and expanding right and left-hand threaded rods and folds when not in use to a length of 9 in. Price \$3.50. A

**Alta Shock Absorber****Hartford Bump Absorber****Trailmobile****Niswander Rim Remover**

heavy type for garage use costs \$6.50.—Niswander Mfg. Co., Quincy, Ill.

**ALTA SHOCK ABSORBER FOR FORDS**

A shock absorber of coil spring type which does not need lubrication and can be installed without drilling or machine work. Price \$20 per set of four

or \$12 for rear wheels only. Alta absorbers for cars of all other makes sell for \$12 per set of two.—Alta Co., 417 Market Street, San Francisco.

**HARTFORD BUMP ABSORBER**

An all-steel flexible car-guard of double-leaf, double-loop spring construction. Standard

attachments for use on almost all cars are furnished. Type for Fords is priced at \$9.50; for medium-sized cars, \$12 and a three leaf type for large cars costs \$14.—Edward V. Hartford, Inc., Jersey City, N. J.

**SU-DIG AND TWIN-TACT SPARK PLUGS**

The Su-Dig plug is for ignition where two plugs spark simultaneously in each cylinder. The Twin-Tact is really two plugs in one, permitting of the use of two separate systems of ignition, such as magneto and battery. Price of either plug is \$1.50.—Superior Motor Power Co., 135 Fifth Avenue, New York.



**SEAL-TITE PISTON RING**

A one-piece eccentric ring with patented lock-joint. Cast individually from fine gray iron with the scale left on inside to give resiliency or life. Made in all sizes.—Seal-Tite Piston Ring Co., 1704 E. Lake Street, Minneapolis.

**PEPCO PISTON RING**

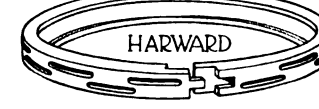
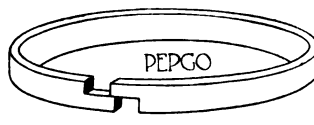
A one-piece ring made from an individual casting and furnished with either stepped or diagonal joint. The material used is close-grained gray iron, and each ring is finished on special automatic machines.—Pennsylvania Piston Ring Co., 203-205 St. Clair Avenue, N. E., Cleveland.

**BURD PISTON RING**

A one-piece concentric ring in which the ends are milled to tongues, the latter being surrounded by a coupling or metallic guard which forms a light joint. Made from fine gray iron, ground to size.—Burd High Compression Ring Co., Rockford, Ill.

**LEAK-PROOF PISTON RING**

A two-piece concentric ring made of special process gray iron and having L-shaped sections each of which seals the opening in the other. Tension is uniform, and the ring is made in over 2000 stock sizes, priced according to size.—McQuay-Norris Mfg. Co., St. Louis.

**INLAND PISTON RING**

A one-piece eccentric ring, made by cutting a continuous ring spirally for half its circumference and then heat-treating it to fix the tension of the metal and thus hold the overlapping ends tightly against each other. Price from \$1 up.—Inland Machine Works, St. Louis.

**HARWARD PISTON RING**

A one-piece ring with interlocking and underlapped joint and a series of oil-pockets designed to form a seal around the cylinder, increase compression and reduce friction. Made in all sizes from \$1.15 up.—Harward Mfg. Co., 3999 Magnolia Avenue, St. Louis.

**V-PLEX PISTON RING**

A three-piece concentric ring in which a center V-shaped piece causes the ring to expand sideways as well as circumferentially.—V-Plex Piston Ring Co., 2133 S. Michigan Avenue, Chicago.

**PRESSURE PROOF PISTON RING**

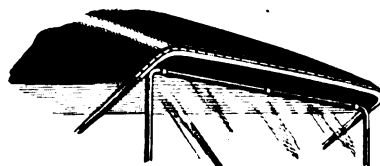
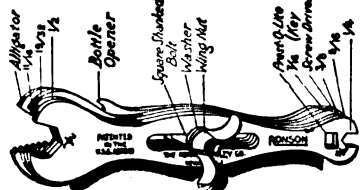
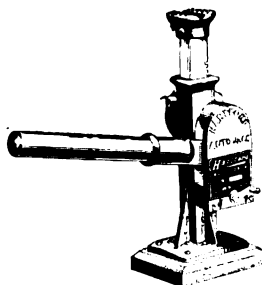
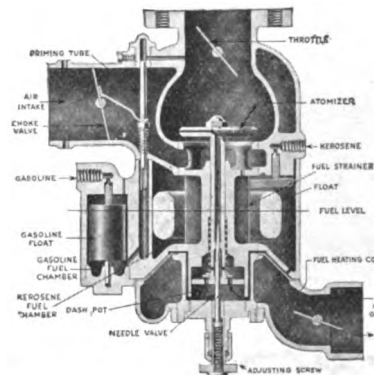
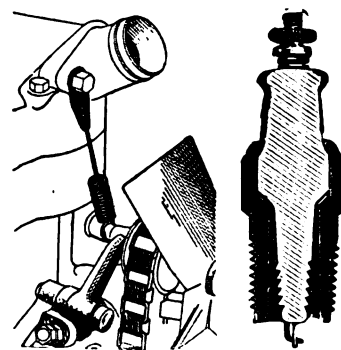
A three-piece ring in which an expanding member presses a beveled member outward and upward. A slightly beveled ring locks the others together. Price from \$1.08 up. The Pressure Proof Junior ring is of two-piece type, operating somewhat similarly. Price from 72 cents up.—Pressure Proof Piston Ring Co., 169 Massachusetts Avenue, Boston.

**ACME PISTON RING**

A one-piece ring furnished with either step or diagonal joint and of concentric type. Made accurately to S. A. E. standards. Price 25 cents for Ford size; other sizes from 30 cents up.—Motor Accessories Corp., St. Louis.

**SUPERIOR PISTON RING**

A one-piece lap-joint ring made from an individual casting of gray iron. The scale is left inside to insure resiliency, and each ring is accurately ground. All sizes are made. Price from 18 cents up.—A. E. White Machine Works, Eau Claire, Wis.

**Monarch Anti-Draft Shield****Ronson Wrench Set****Hartford Jack****Knox Kerosene Carburetor****Swan Adjuster Carbon-Proof Plug****MONARCH ANTI-DRAFT SHIELD FOR FORDS**

This shield covers the opening between the top of the windshield and the top and prevents drafts blowing in on the driver. It can be attached with the aid of a screwdriver. It is fastened with clamps to the shield and secured to the top with fasteners. Fits 1914-15 models.—Monarch Carriage Goods Co., 2838-2844 Spring Grove Avenue, Cincinnati.

**HARTFORD JACK**

A jack with a long handle and a short stroke, capable of lifting a 4000 lb. car with a minimum of effort. Gears are cut from solid steel and all moving parts are encased so that the mechanism is dust-proof and

weather-proof. Price \$8.—Edward V. Hartford, Inc., Jersey City, N. J.

**KNOX KEROSENE CARBURETOR**

This is a kerosene carburetor in which the fuel is heated, mixed with warm air and then still further heated. Gasoline can also be used and there are separate connections for the two fuels. Prices \$35 to \$85.—Camden Anchor-Rockland Machine Co., Camden, Me.

**RONSON WRENCH**

A combination tool made of case-hardened steel. Comprises wrenches of various sizes, alligator wrench, screwdriver, bottle opener, Prest-O-Lite key, etc. Weighs 8 oz. Price \$1.—

Art Metal Works, 7-15 Mulberry Street, Newark, N. J.

**SWAN FAN BELT ADJUSTER FOR FORDS**

A device for automatically regulating the tension of the fan belt. It consists of a coil spring and a fitting which connects the fan bracket to a stationary part of the engine. Attachment can be made in a few minutes without special tools. Price 35 cents.—Mechanical Belt Co., St. Joseph, Mo.

**PEERLESS ANTI-FREEZE**

This is a liquid compound to be mixed with the cooling water to prevent it from freezing above certain specified temperatures, the freezing point de-

pending on the strength of the solution. Price \$1.25 per gal.—Columbus Varnish Co., Columbus, Ohio.

**CARBON-PROOF A.C. SPARK PLUG**

The insulator is made of a new porcelain which is stated to be uncrackable and superior electrically as it does not permit current to leak through the insulation. The porcelain has saw-tooth edged ribs, which become sufficiently hot to burn away any carbon which may be deposited. This plug was designed originally for Ford and Studebaker engines, but is also used as standard factory equipment on the Fordson tractor. Price \$1.—Champion Ignition Co., Flint, Mich.



**REFLEX SPARK PLUGS**

A line of plugs having Chromite porcelains and non-pitting electrodes. The Giant plug is designed for heavy duty service in tractors and trucks, the heavy electrode being fully protected by the enclosed construction. The shell is nickel-plated. Price \$1.25. Also made with mica insulation at \$1.50.—Reflex Ignition Co., Cleveland.

**BENNETT. TYPE C KEROSENE CARBURETER**

This carbureter vaporizes kerosene with the heat of the exhaust which is controlled by a damper. A water needle is provided for spraying water into the carbureter in case of pre-ignition. Both low and high-speed adjustments are provided and separate connections supply gasoline and kerosene. Made in sizes from ¼-in. to 3-in. Prices \$30 to \$75.—Wilcox-Bennett Carbureter Co., Minneapolis.

**ASKE AUTOMATIC VOLTAGE REGULATOR FOR FORDS**

A device designed to control automatically the delivery of current at all engine speeds and to maintain one headlight in operation without increased voltage should the other fail. Price \$5.—Aske Automatic Voltage Regulator Co., Duluth, Minn.

**SEARS-CROSS SPEEDOMETER EQUIPMENT FOR FORDS**

Model F.C.N. speedometer and cowl dash furnishes a speedometer which is set flush in the cowl. It is fitted with the regular straight bronze drive used with other models, but where cars are fitted with shock absorbers a swivel drive is supplied at slight extra cost. Price of regular type is \$12.—Sears-Cross Co., Brooklyn, N. Y.

**FERNALD STEER-AID FOR FORDS**

This is a device made of tempered steel wire and intended to be slipped in position with one end behind the steering knuckle and the other over the steering rod. Their function is to eliminate rattle, to keep the front wheels in alignment, to reduce tire wear and skidding and to save the bushings. Price 50 cents per pair.—Fernald Mfg. Co., North East, Pa.

**WORKRITE HYDROMETER OUTFIT**

This is a combination of hydrometer, syringe and a container to hold distilled water. The top and bottom rubbers of the syringe extend beyond the tube to protect it from breakage. Price \$1.50.—Workrite Mfg. Co., Cleveland.

**EVER LAST TIRE RESOLES**

These are treads of fabric and tread rubber applied over worn tires and vulcanized in place. Made to fit tires from 30 x 3 to 37 x 5 in. Prices \$10.50 to \$33.50.—Ever Last Tread Co., Inc., Indianapolis.

**PHILADELPHIA DIAMOND-GRID BATTERIES**

These are starting, lighting and ignition batteries with diamond grids. A special model for trucks and tractors, No. 136 U. S. A., is of rugged type, the jars of special compound hard rubber and rubber used in conjunction with the wood separators. The grids are heavy.—Philadelphia Storage Battery Co., Ontario and C Streets, Philadelphia.

**INTERNATIONAL RUNNING-BOARD TIRE CARRIER**

A side tire carrier adapted either for passenger car runningboard or for trucks having pneumatic tires. Made for either one or two tires of sizes from 3½ in. to 4½ in. Prices from \$4.50 to \$7.—International Stamping Co., 400-412 N. Leavitt Street, Chicago.

**MOSLER SPARK PLUGS**

A line which includes heavy duty and tractor plugs. These have center cores of mica, combined with a steel bushing

spindle around which the sheets of mica are wound laterally. Heavy laminated mica washers give further protection against oil, water and mechanical action. Price \$2.—A. R. Mosler & Co., New York.

**SUNDERMAN GASOLINE SHUT-OFF FOR FORDS**

This device allows the gasoline to be shut off at the tank by means of a rod which attaches to the tank cock, the other end coming through the floorboards at the front of the driver's seat. Price 50 cents.—Sunderman Corp., Newburgh, N. Y.

**WORKO CARBON REMOVER**

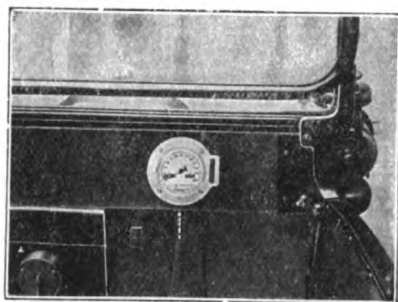
This is a carbon remover in tablet form, the tablets being introduced into the combustion chamber through the spark-plug holes. When heated they form a gas which is claimed to break up the carbon so that it can be blown out through the exhaust. Price \$1 for box containing 24 tablets, \$2 for box containing 72 tablets.—Worko Co., Racine, Wis.

**McKEE LENS**

This is a lens to eliminate glare and throw the light rays down on the road. The top part has vertical ribs and the bottom part horizontal ribs. Prices \$2.50 to \$4, depending on size.—McKee Glass Co., Jeanette, Pa.



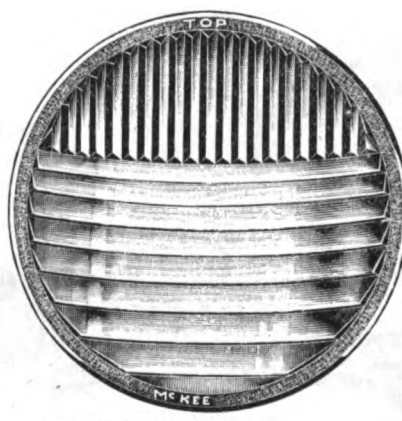
Reflex Plug



Sears-Cross Instrument Board



Workrite Hydrometer



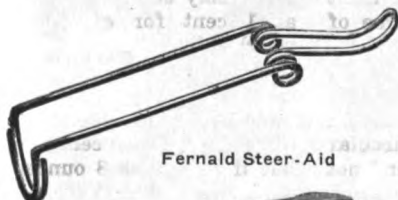
McKee Lens



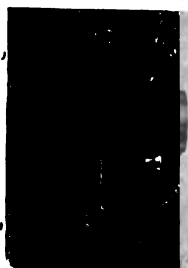
Mosler Plug



Aske Voltage Regulator



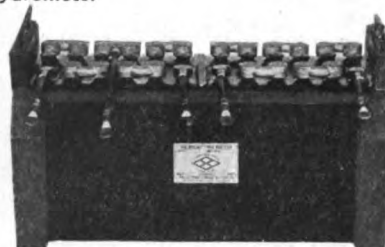
Fernald Steer-Aid



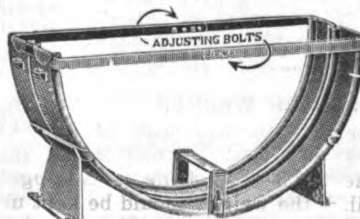
Bennett Kerosene Carbureter



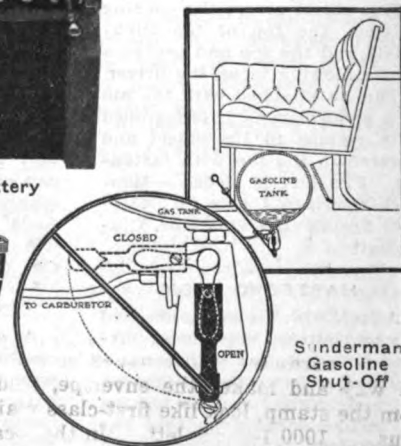
Ever Last Resole



Philadelphia Storage Battery



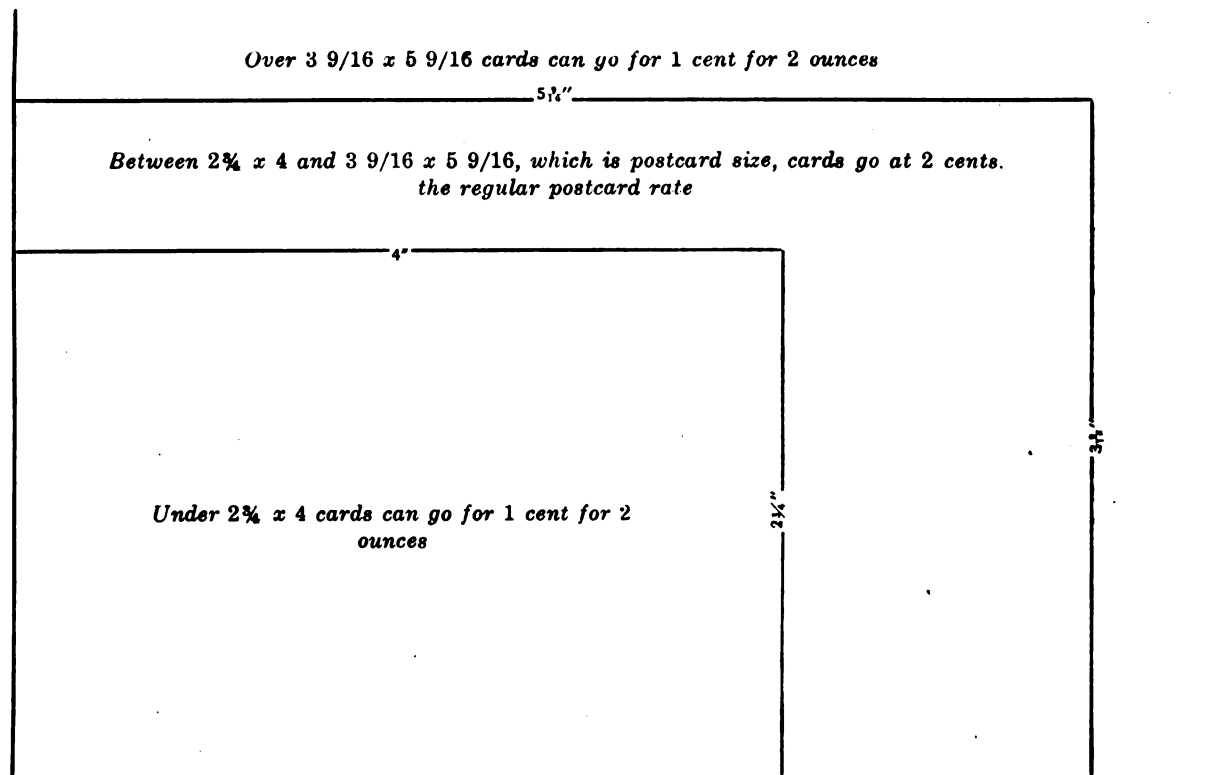
International Tire Carrier



Sunderman Gasoline Shut-Off

# How to Send Mail at Less Than First-Class

*A Cut in Your Postage Bill Means a Big Annual Saving. Here Is  
How To Do It*



**D**ESPITE the high postage rates of the present day the Government offers cheap postage for the business man if the latter will only look into the matter of rates and use the cheap rates. There are several ways:

1—Make sure all your local mail is segregated in mailing and stamped with two cents only. Letters outside the local zone go for three cents an ounce, those inside for two cents an ounce.

2—Circular letters, wholly in print, without any handwriting or real type-writer writing, may be sent for 1 cent for 2 ounces, which is the third-class rate and is one-sixth the first-class rate. But these letters must be left unsealed. The way to do this is to get a special envelope which has a small inconspicuous flap at one end which permits opening for inspection yet is not apparent to the recipient of the letter. The letter is sealed and handled in the regular way, the flap being so arranged that it tucks in out of the way and makes the envelope, aside from the stamp, look like first-class mail. Thus, on 1000 1-ounce letters in the local

zone \$10 could be saved. Outside the local zone \$20 could be saved.

This, however, means that there must be no writing except the date, name of person to whom letter is going and name of the sender. The letter must be all printed—a real circular letter. But there is little need of much of the filling in that is done to-day. A filled in circular letter is always a circular letter and not one in 1000 is so disguised that it cannot be detected as a circular. Therefore, as long as the recipient is going to know anyway that it is a circular letter the filling in and faked signing is largely wasted effort. It is better to make a neat printed job and let it go at that.

By using this rate of postage catalogs and circulars may be enclosed with the letter, and if the weight is not more than 2 ounces it can go for 1 cent, whereas first class it would require 6 cents. Four ounces third class goes for 4 cents against 12 cents first class.

3—In getting up catalogs and booklets the weight should be kept under 8 ounces wherever possible by close trimming.

light stock, light covers, etc. The reason for this is that under 8 ounces the material may be mailed as "printed matter" at 1 cent for each 2 ounces. If the weight, including wrapper, is 8 ounces or more, it takes parcel post rates. For example: A catalog weighing 7 ounces may be sent all over the world for 4 cents, which is 1 cent for each 2 ounces, but if it weighs 8 ounces or over parcel post rates apply, and these would be, for example: New York to Detroit, 7 cents; New York to Chicago, 8 cents; New York to New Orleans, 9 cents; New York to San Francisco, 12 cents.

4—Post cards also offer a cheap means for sending short messages, especially in follow-up work. The regular post card rate is 2 cents for a card between the following sizes:  $2 \frac{3}{4}$  in.  $\times$  4 in. and  $3 \frac{9}{16}$  in.  $\times$   $5 \frac{9}{16}$  in. If larger or smaller than these sizes a card may be mailed third class for 1 cent for each 2 ounces provided: A—The cards are wholly in print, except the address. B—The card does not bear the label "post card" or "private mailing card."

**SCHUTTE BODIES**

These are military sport bodies for different makes of cars, including the Ford. They are to be had in a number of different styles, including ones with coupe top and turtle deck. —Charles Schutte Body Co., Lancaster, Pa.

**GOODSELL - PRATT HIGH SPEED BREAST DRILL**

A new type of drill designed to drill a large number of small holes very rapidly. A series of gears causes the spindle to make seven revolutions to each turn of the crank. The gears are enclosed in an aluminum casing to protect them from dirt and are packed in grease. Spindles run in ball bearings. —Goodsell-Pratt Co., Greenfield, Mass.

**HERZ SPARK PLUG**

A mineralized mica core is used in the improved type. This is stated to be unbreakable and oilproof. It is built up of mica washers around a mica tube, compressed under very high pressure and making practically a solid unit. Special plugs are made on this principle for tractor and truck engines. Price, standard type, \$1.50; tractor type, \$2. —Pro-Mo-Tor Fabricating Corp., 245 West 55th Street, New York.

**DEAD-EASY TIRE PUMP**

A 4-cylinder tire pump intended to be clamped to the runningboard. It can be either carried in the toolbox or bolted to the runningboard through the bottom of the box. A gage shows the exact pressure and equipment includes 12 ft. hose, connector and clamps for attachment. Price \$15. —Globe Mfg. Co., Battle Creek, Mich.

**JACKSON TRAILERS**

A line of trailers with ball bearing axles, 1½ in. solid rubber tires on split hickory wheels and fitted with drop end gates. Models with rack or delivery bodies and of 800 lb. capacity sell for \$57.50; 1200 lb. capacity at \$90 and 1500 lb. capacity at \$125. —Miles Mfg. Co., Jackson, Mich.

**RED SPOT SEARCHLIGHT**

A searchlight which emits either a concentrated beam or a diffused illumination at the will of the user. In case of emergency the touching of a button changes the white light into a red danger signal. Rear-view mirror is adjustable. Price \$7, or without mirror, \$6.50. —F. W. Wakefield Brass Co., Vermillion, Ohio.

**PERFECTION FUR LINED FOOT MUFFS**

No. 1004 is made with plush cover and lined with black Russian wolf-dog, price \$3.50. No. 1006, costing \$5, has a cover of genuine leather and the lining is similar to that of the other number. Either of these muffs is sufficiently large for both feet. Many lines of robes, shawls, rugs, etc., are made. —Perfection Robe Co., 16 South Market Street, Chicago.

**CASSCO TIRE PUMP**

This is an engine-driven tire pump that takes little room and is furnished complete with brackets for attaching. It has a positive gear shift that automatically locks. The valves are of poppet type. Price \$15 complete. —Edward A. Cassidy Co., Inc., Madison Avenue and Fortieth Street, New York City.

**WOOD'S EVERLOC PATCH**

A three-ply, fabric patch designed to effect a permanent tube repair without vulcanizing. Comes in three sizes at \$1.50, \$1 and 50 cents. Outfit includes sheet of patching and tube of cement. —W. C. Wood Co., 74 Western Avenue, Minneapolis.

**VAN SICKLEN SPEEDMETER EQUIPMENT FOR FORDS**

A cowl board and complete equipment of speedmeter, clock and light costs \$18; without clock, \$16, and with speedmeter only, \$15. Other types at slightly increased prices are made for Ford coupes and sedans. —The Van Sicklen Co., Elgin, Ill.

**ROGERS BRAS-SHINE**

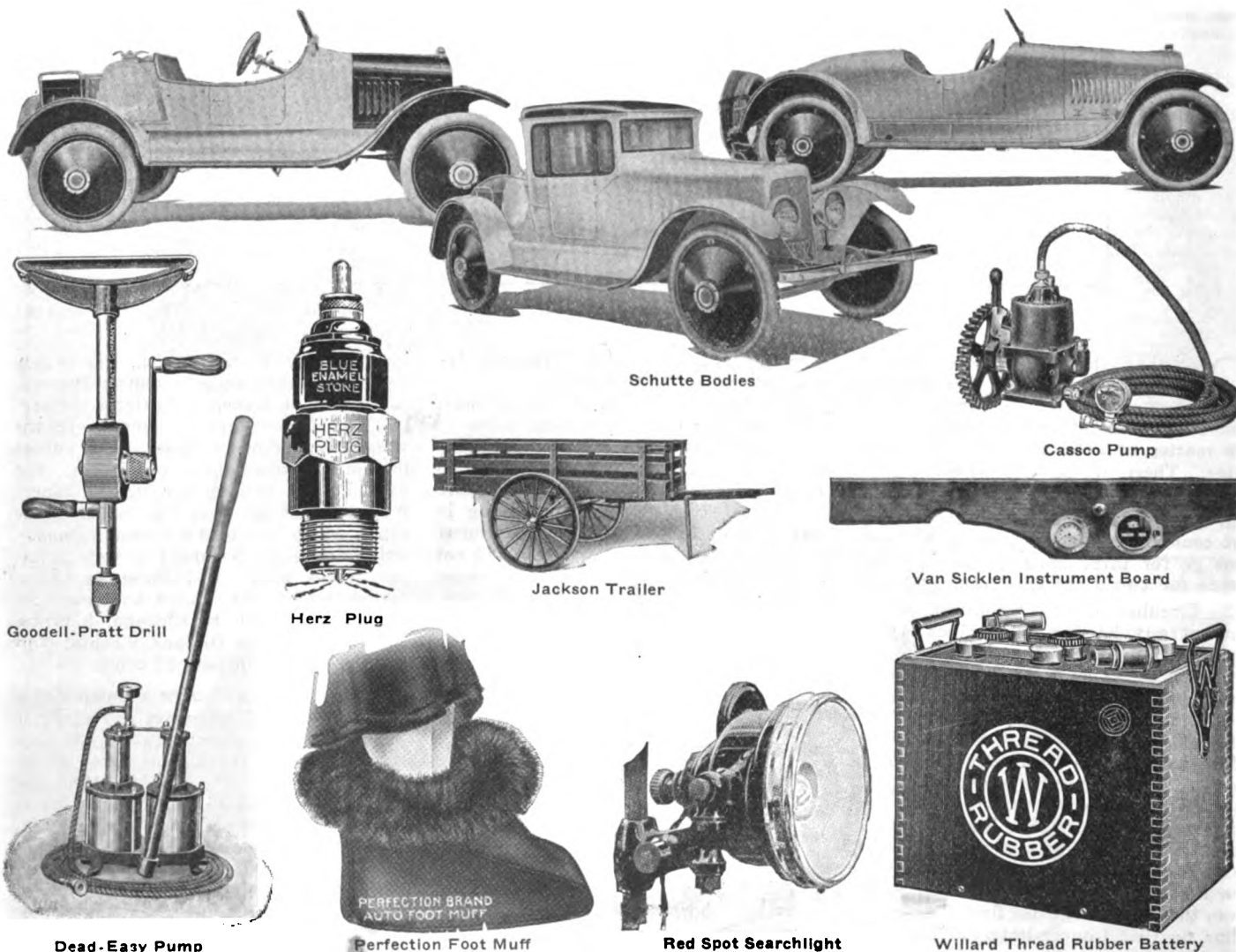
This is a liquid metal polish that contains no grit and is claimed not to injure the surface to which it is applied. Price \$1.50 per gal. —Detroit White Lead Wks., Detroit.

**PANVAR BODY FINISH**

This is a liquid finish which is applied to the body with a brush. It is self-leveling and dries hard in 8 hrs. Packed in friction-top cans. Quart can \$1.50; gallon can \$5. —Panvar Co., Bulletin Bldg., Philadelphia.

**WILLARD STORAGE BATTERY**

This is the "Still-Better" battery with threaded rubber insulation especially designed for passenger-car use. Made in all sizes and shapes to conform to standard cars. —Willard Storage Battery Co., Cleveland.



Schutte Bodies

Cassco Pump

Jackson Trailer

Van Sicklen Instrument Board

Goodsell-Pratt Drill

Herz Plug

Dead-Easy Pump

Perfection Foot Muff

Red Spot Searchlight

Willard Thread Rubber Battery

**KANT-MIS SPARK PLUG**

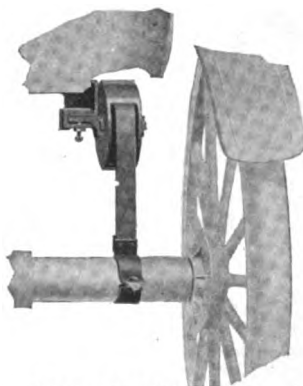
A plug in which the central electrode terminates in a plate having indentations and projections somewhat similar to the wards of an ordinary key. It is claimed that this feature insures a perfect spark, and also that any oil deposited on the plug is immediately burned away. Price \$1.25.—Kant-Mis Spark Plug Co., 409 S. Washington Street, Green Bay, Wis.



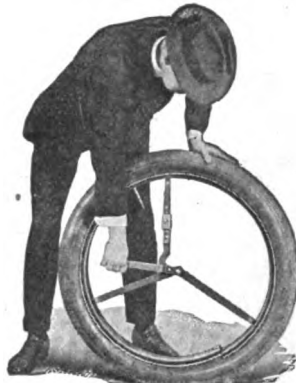
Kant-Mis Plug

**VELVET RECOIL DEADENER**

An arrangement of drum, spring and rebound strap, the latter being attached to the axle and the drum and spring to the car frame. Designed to eliminate shocks and check recoil. Price \$15 per pair, front or rear. A special type for Fords sells for \$9.—John W. Blackledge Mfg. Co., 341-349 E. Ohio Street, Chicago.



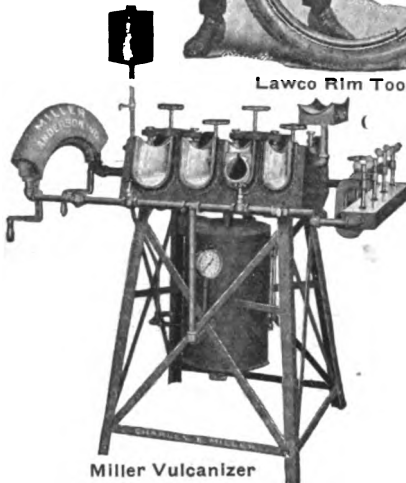
Velvet Recoil Deadener



Lawco Rim Tool

**KIMBALL ANTI-SKID CHAINS**

An anti-skid clasp which is clamped around the felloe by a cam arrangement. Made from flat steel with a thread plate 2 in. wide and links 1 1/4 in. in width. A piece of leather keeps the band from marring the varnish. Price 40 cents each for 3 and 3 1/2 in. tires, 50 cents for 4 and 5 in. tires.—Kimball Tire Case Co., Council Bluffs, Iowa.



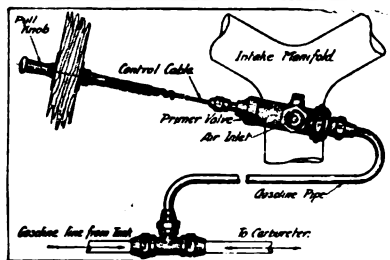
Miller Vulcanizer

**MILLER 4-CAVITY VULCANIZER**

A block-cast sectional vulcanizer having cavities measuring 3 3/4, 4 and 4 1/4 in. across. The 4 1/4 in. cavity will handle 4 1/2 and 5 in. casings satisfactorily. Comes with inside vulcanizer and 24 x 4 in. tube vulcanizer with clamps. With this vulcanizer the use of reducing shells is not necessary.—Chas. E. Miller, Anderson, Ind.

**COPLEY PRIMER**

This is a primer attached to the intake manifold. When it is placed in the open position by pulling the knob on the dash, the valve is opened and gasoline is drawn up through the nozzle and mixed with the air coming through the check valve in the side, supplying a mixture to start on. Price \$5.—Bay State Pump Co., 100 Purchase Street, Boston.



Copley Primer

**HEL-FI SPARK PLUG**

Four ground electrodes paralleling the center electrode are one of the features of this plug. This form of construction is used to give a greater sparking surface and insure maximum power. A terminal cap gage is used to properly adjust the distance of the ground electrodes from the center electrode. Price \$1.25.—Motor Accessories Mfg. Corp., Marshalltown, Ia.



H. &amp; D. Shock Absorber



Hel-Fi Plug



Brisk Blast Pump

**BRISK BLAST TIRE PUMPS**

Made in two double and one single model, of 20-gage steel tubing finished in baked black japan. Rods are of Bessemer steel and has cloth insertion. Special pistons eliminate air waste and prevent wear on the gasket. Valve construction allows all the air to pass freely while making its return impossible.—Brisk Blast Mfg. Co., Monroe, Mich.

**LAWCO RIM TOOL**

This tool is designed to enable the user to remove a tire from any transversely split demountable rim in a few seconds. It operates by a lever movement which actuates a set of claws which are hooked over the rim. Price \$3.50.—F. H. Lawson Co., Cincinnati.



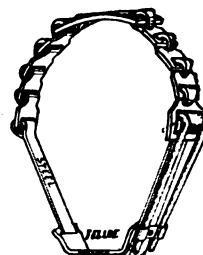
Allen Tire Case

**ALLEN TIRE CASES**

Made in several styles from special enameled duck with strong canvas backing and non-peeling coating. Each case is waterproof and is cut to fit the various makes of non-skid and plain tires. Cases are made in either black or colors to match car body. Prices are from \$4.50 up.—Allen Auto Specialty Co., 16-24 West 61st Street, New York.

**AIM SPARK PLUGS**

Cores are made of India mica and are guaranteed not to absorb oil or to short-circuit. Made in all sizes. Price \$1. A special plug, known as "Long Henry," is made for Ford engines and sells for 75 cents.—Auburn Ignition Mfg. Co., Auburn, N. Y.



Kimball Chain

**BLAKE CLAMP LOCK**

This is a clamp lock to clamp luggage carriers and battery boxes to the running board. The upper end of the clamp catches in a metal pocket attached to the article to be clamped and the lower end has a clamp screw.—Blake Mfg. Co., South Bend, Ind.



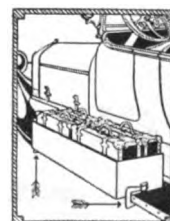
Aim Plug

**H. & D. SHOCK ABSORBER FOR FORD TRUCKS**

A shock absorber of cantilever type designed to take the bumps and thrusts of the road and to eliminate side-sways. Arms are of malleable iron, toughened, and springs are of special steel wire. Price \$15 per set of four.—H. & D. Co., Goodland, Ind.

**PEERLESS MOHAIR-TOP DRESSING**

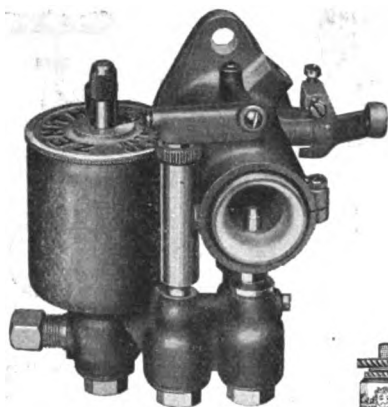
This is a liquid waterproof dressing for mohair tops which are in good condition, but which leak in rainy weather. It does not build up the mohair, but cements the material together. Dries overnight. Price, pint can 65 cents; quart can \$1.25; gallon can \$4.25.—Columbus Varnish Co., Columbus, Ohio.



Blake Clamp Lock

**ZENITH MODEL O4 CARBURETER FOR FORDS**

This Zenith model is interchangeable with the carbureter on the Ford and is furnished with all attachments for quick installation. A compound nozzle admits fuel in direct proportion to the demands of the engine. Price \$20.—Zenith Carbureter Co., Detroit.



Zenith Carbureter

**ECO NUMETHOD PISTON RING**

A plain one-piece ring made from individual castings. It is of concentric type and designed to give equal radial pressure at all cylinder points. The metal used is of fine grain, tough and uniform in temper. All sizes are made. Price 4¢ cents.—Eco Mfg. Co., 53 State Street, Boston.

**HERBRAND NO. 2 SOLID WRENCH SET**

This is a set of solid open-end wrenches with openings for S.A.E. standard nuts and cap screws from 1/4 to 3/4 in. Price, unfinished \$2.05, semi-finished \$2.95, finished \$3.88. Canvas roll or wooden box 45 cents extra.—Herbrand Co., Fremont, Ohio.



Herbrand Solid Wrenches

**PETELER JACK**

This is a lifting jack with a long telescoping handle by means of which it can be slid under the car. It has a short stroke on the handle and each stroke lifts the car 1/2 in. Made in 2 sizes, 8 1/2 to 14 in. lift and 10 1/2 to 17 1/2 in. lift. Price \$6 for either model.—Coe-Stapley Mfg. Corp., Bridgeport, Conn.



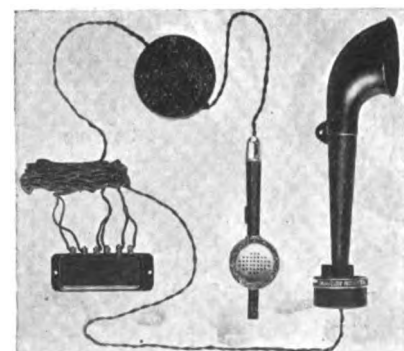
Peteler Jack

**PERMA-LOC VALVE GRINDING COMPOUND**

This is a fast and clean-cutting valve-grinding compound, packed in a combination box containing coarse and fine grades in different compartments. Price 35 cents per can.—Perma-Loc Mfg. Co., Scranton, Pa.

**KLAXON AUTOPHONE**

This is an electrical instrument for communicating by voice from the interior of closed cars to the chauffeur. The transmitter is brought close to the mouth of the speaker, the cord being wound on an automatic reel. The receiver is placed near the driver's head.—Klaxon Co., Detroit.



Klaxon Autophone

**WHIZ ANTI-FREEZE COMPOUND**

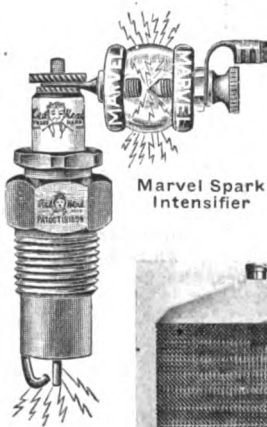
This is a liquid compound to lower the freezing point of the cooling water, the freezing point depending on the strength of the solution prepared. Packed in 1-gal. cans. Price \$1.75.—R. M. Hollingshead Co., Camden, N. J.



Goodrich Lockswitch

**GOODRICH LOCKSWITCH FOR FORDS**

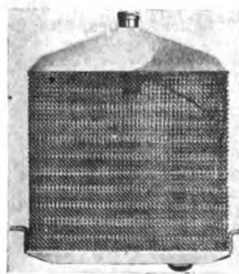
This is a switch lock for Fords to lock the switch on or off. It has a Yale lock, covered screw heads and cannot be wired around, as a concealed ground contact makes rewiring impossible. Price \$3.50.—Goodrich-Lenhart Co., Widener Bldg., Philadelphia.



Marvel Spark Intensifier

**MARVEL SPARK PLUG INTENSIFIER**

An adjustable spark gap designed to improve the firing of the plug, to facilitate adjustment and reduce wear on electrode points by reducing amperage. Price 40 cents.—Wm. Simpson, 228 S. Wells Street, Chicago.



Lober Radiator

**LOBER RADIATOR FOR FORDS**

The core is made of brass with wide brass springs between each water tube section. Water boxes are of heavy sheet brass, filler neck and cap are cast brass and side brackets are made of 1/2-in. steel. Price \$35.—Nelson J. Quinn, Toledo, Ohio.



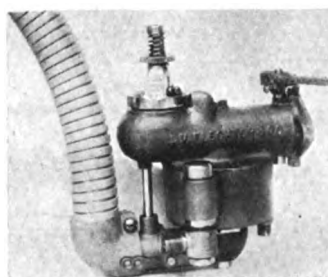
Commercial Body for Ford

**COMMERCIAL BODY FOR FORD TRUCK**

This is a heavy body for the Ford 1-ton truck. The loading space is 45 x 90 in. and the fittings include curtains, windshield and drop end-gate. Price \$114.—Auto Body Wks., Inc., Appleton, Wis.

**TRIDENT MODEL FLECHTER CARBURETER FOR FORDS**

This carbureter is made of bronze and cast iron and the fuel feed is regulated by the speed of the engine. There are two adjustments and these are locked in place. Price \$10.—L. V. Flechter & Co., 192-200 Jackson Avenue, Long Island City.



Trident Carbureter

**ADVANCE CORK-INSERT BRAKE LINING FOR FORDS**

The transmission lining is fabric with buttons of cork inserted at intervals. It is cut in the proper lengths for the Ford transmission, and 3 are packed in a carton complete with rivets. Price \$3 per set.—Advance Automobile Accessories Corp., 56 East Randolph Street, Chicago.



Victor Tractor Lamp

**VICTOR TRACTOR LAMP**

This is a lamp for tractor use for farming at night. It does not throw a long beam of light, but has a shallow reflector that throws an even, widely diffused light in front of the tractor in the field ahead. An auxiliary lamp at the rear shows the implements. Can be adjusted to any angle. Price \$10.50.—Corcoran-Victor Co., Cincinnati, Ohio.



**SUNDERMAN MANIFOLD FOR FORDS**

This is an intake manifold for Fords with a bend at the top designed so as not to retard the speed of the gas. There is also a pocket at the lower end to catch the gasoline that "loads" when the engine idles. Price \$2.50.—Sunderman Corp., Newburgh, N. Y.

**AIR-FRICTION SPARK PLUG**

A line of plugs which includes metric and Ford sizes. These plugs have special porcelain which are stated to be unbreakable and are so constructed that they will neither soot nor foul. Price \$1.—Air-Friction Carburetor Co.

**PRESTO ELECTRIC HEATER**

This is an electric heater intended to be hung inside the hood at nights to keep the engine warm. It attaches to any lighting socket and uses either alternating or direct current. Price complete with 10 ft. cord and plug, \$3.50.—Metal Specialties Mfg. Co., 338-352 North Kedzie Avenue, Chicago.

**KRATZER GRAIN BODY FOR FORD TRUCKS**

This is a complete grain body for Ford 1-ton trucks and is fitted with angle grain cleats to make it grain tight. It has

a Comstock-type dump end-gate and full-length standing boards. The floor is hardwood tongue and groove. The finish is gray.—Kratzer Carriage Co., Des Moines, Ia.

**GLOWLITE LENS**

This is a headlight lens to prevent glare and distribute the light over the road to the best advantage. The lens is curved, the sides have stipple marks in the glass and an amber spot covers the center. Price \$2 per pair for any size.—Glowlite Co., Columbus, Ohio.

**BENNETT CARBURETOR AIR CLEANER**

This is a centrifugal air cleaner to take the dust out of the air before it enters the carburetor. The air enters at the sides and is whirled through spiral tubes, the dust dropping to the cup at the bottom. No water is used. Sizes ¾-in. to 2½-in. Prices \$9 to \$12.—Wilcox-Bennett Carburetor Co., Minneapolis.

**K-D ELECTRIC TAIL LAMP FOR FORDS**

This is an electric tail-lamp outfit for Fords, there being 2 lamps, one operating from the magneto when the engine is running and the other operating from 2 dry cells when the

engine is stopped. Price \$2.50, complete with switch. — K-D Lamp Co., Cincinnati, Ohio.

**PERFECTION CAR HEATER**

This is a car heater, the exhaust gas being piped to a radiator coil in the floor, the coil being covered with a grating. The amount of heat is adjustable by means of a valve. Made in 8 styles to fit all models of cars. Prices \$20 to \$30.—Standard Parts Co., Heater Department, Cleveland.

**ZENITH MODEL L CARBURETOR**

This is a gasoline carburetor adapted to any method of fuel feed. It has a compound nozzle which automatically supplies the fuel in accordance with the requirements of the engine. Made in 5 sizes, 1-in., \$25; 1¼-in., \$30; 1½-in., \$35; 1¾-in., \$40; 2-in., \$50.—Zenith Carburetor Co., Detroit.

**DETROIT GASOLINE GAGE FOR FORDS**

This gage has a dual entrance to the gasoline tank, thus permitting the latter to be filled without removing the gage and allowing the fuel purchased to be checked up while the tank is being filled. Measures gallons, half-gallons and quarts. Price \$1.75.—Detroit Gasoline Gauge Co., 401 Marquette Bldg., Detroit.

**PERMA-LOC RADIATOR CEMENT**

This is a dry powder to be poured into the radiator through the filler. It dissolves in the water and solidifies on coming in contact with the air through a leak. Packed in a screw-top can. Price 75 cents.—Perma-Loc Mfg. Co., Scranton, Pa.

**WAXIT BODY POLISH**

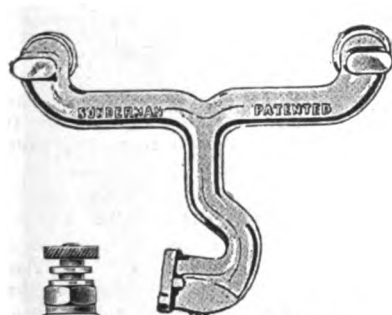
This is a liquid emulsion that is applied to the body and then rubbed dry. The wax oil forms a film over the finish. Packed in screw-top tin cans. Quarts \$1.25; half-gallons \$2; gallons \$3.50.—Waxit Mfg. Co., Old Colony Bldg., Chicago.

**ROGERS CARBON SOLVENT**

This is a liquid carbon solvent to be introduced through the priming cups or spark plug holes to dissolve the carbon deposit. Packed in tin cans. Price 60 cents per pint. — Detroit White Lead Wks., Detroit.

**NU-EX FIRE KILLER**

This is an automatic fire extinguisher that discharges the liquid by compressed air. The liquid is released by turning a valve. Claimed not to freeze, deteriorate or injure fabrics. Price \$12.50.—Nu-Ex Fire Appliance Co., Columbus, Ohio



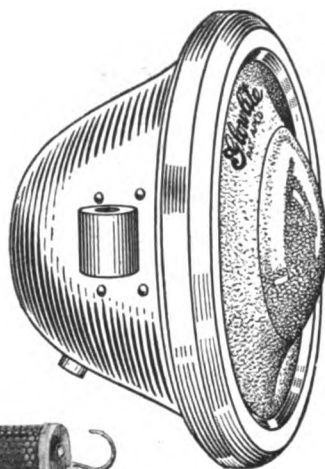
Sunderman Manifold



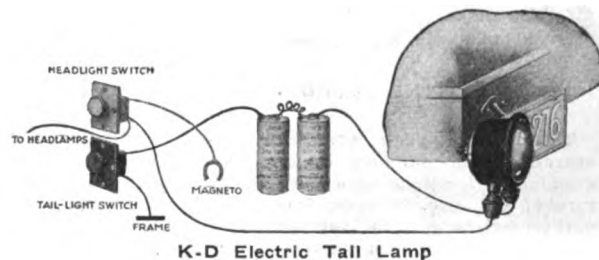
Air-Friction Spark Plug



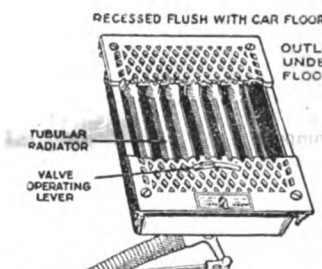
Presto Electric Heater



Glowlite Lens



K-D Electric Tail Lamp



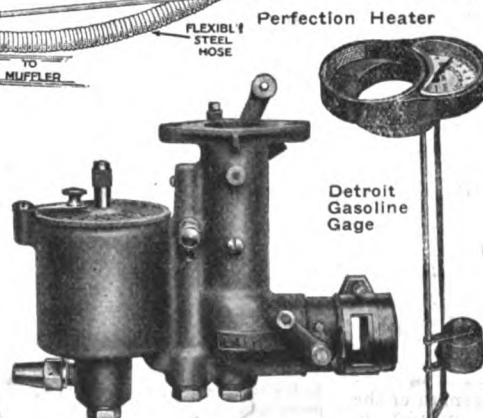
Perfection Heater



Kratzer Grain Body



Bennett Air Cleaner



Zenith Model L Carburetor



Detroit Gasoline Gauge



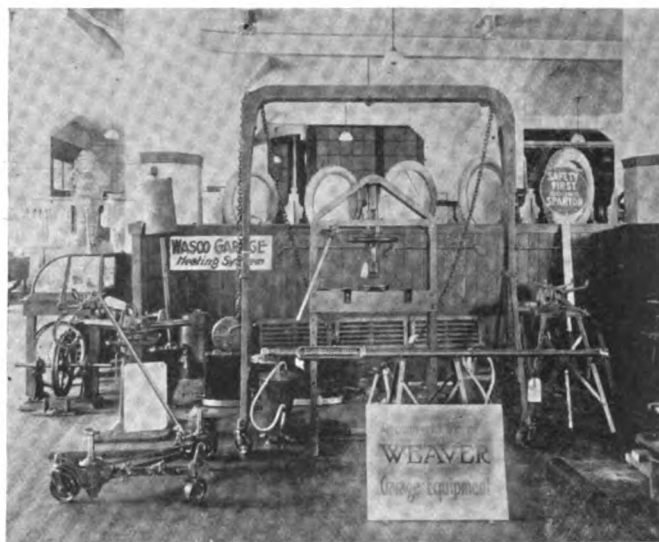
Nu-Ex Fire Killer



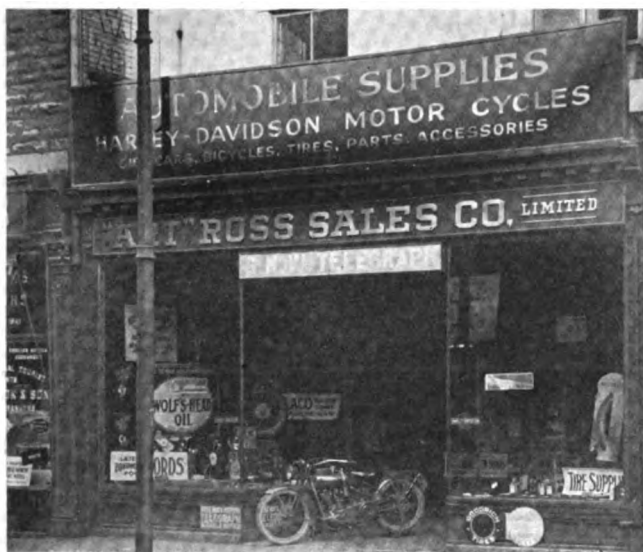
## How They Sell Accessories in Land of the Maple Leaf



The inside of the "Art" Ross Sales Co., Montreal, is such as makes the prospective buyer think of a lot of things he wouldn't think of if he couldn't see them all around him



The Canadian Fairbanks-Morse Co., Montreal, which is a jobber, has on its floor a display of the labor saving equipment it wants Canadian dealers to use



The windows of the "Art" Ross Sales Co. are used to an advantage that might well be copied by some of the numerous garagemen whose window space is going to waste



And this is another view of the inside of the Canadian Fairbanks-Morse establishment. You've no idea how a good show case display helps get accessories and supplies into the motorist's hands



Kenyon Motor Coat



Hercules Plug

### KENYON MOTOR COAT

This is a reversible leather-gabardine knee-length coat with belted back and side pockets. It is double breasted and has a storm collar. Price \$47.50.—C. Kenyon Co., Inc., New York.

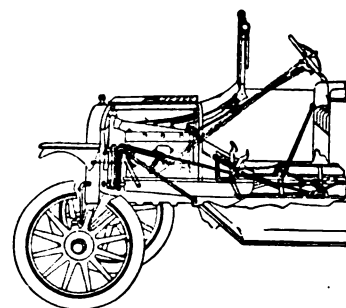
### HERCULES SPARK PLUGS

A feature of these plugs is a spring gland which slips over the porcelain and absorbs contraction and expansion by its sliding motion. It also relieves strain on the copper-asbestos seat and takes up any slack caused by expansion. The Giant plug sells for \$1, the Junior is

75 cents and a special plug for tractors is made with  $\frac{1}{4}$ -in. pipe thread.—Eclipse Mfg. Co., Indianapolis.

### 3-POWER LEVER STARTER FOR FORDS

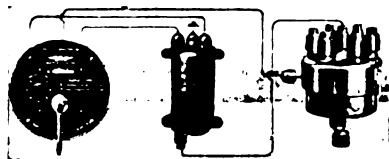
A mechanical starter in which the third power is furnished by a strong spring which is stretched out when the hand-lever is pushed forward. This not only assists in turning the engine over, but holds the foot lever (the second power) firmly down against the footboards. Price \$22.—Quality Appliance Mfg. Co., 325 S. Western Avenue, Chicago.



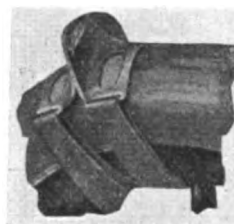
3-Power Starter

**PHILBRIN IGNITION SYSTEM FOR FORDS**

This is an ignition system for Fords that uses the current of the Ford magneto and converts it into a shower of sparks of high frequency at the electrodes of the plugs. Price complete with brackets for mounting, \$27.50. — Philips-Brinton Co., Kennett Square, Pa.



Philbrin Ignition System



Gemco Mud Hook

**SHALER FORD-KIT VULCANIZER**

This is a portable vulcanizer to mend cuts in Ford casings and tubes. The heat is generated by a torch that absorbs the liquid so that it will not spill. Tubes are clamped flat against the surface and a chain holds the curved side to the casings. —C. A. Shaler Co., Waupun, Wis.



Schluter Belt Attachment

**KING TRAILERS**

A line of trailers, semi-trailers and fifth wheels. Regular trailers, models A and B, have capacities of 1500 and 1200 lb., square axles, semi-elliptic underslung springs and 32 x 2-in. rubber tires. Pole trailers for hauling long material are made in three capacities and attachments for semi-trailers are made in three sizes. —King Trailer Co., Ann Arbor, Mich.



Bethlehem Plug



Shaler Ford-Kit



Jiffy Jack



Sterling Plug



Keene Pump



King Trailer

**BETHLEHEM SPARK PLUGS**

The 3/4-in. extension tractor plug has insulation of India Ruby mica and is designed to withstand heavy service, a special 3/4-in. aviation plug is also used in engines developing unusual conditions of heat, as in the case of Fire Department service, and the Hex plug is of one-point type, constructed of materials similar to the 5-point Bethlehem. Prices are \$2, \$1.50 and \$1, respectively. —Silvex Co., South Bethlehem, Pa.



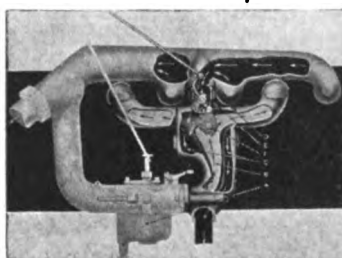
Miami Trailer



Stewart V-Ray



Lane's Jack



Holley Manifold



Raybestos Brake Band

**SCHLUTER BELT ATTACHMENT**

This is an attachment for converting the power of the Ford engine for belt work. It slips on the front of the car in place of the starting crank and can be taken off or put on in a few seconds. Price \$27.50. —E. F. Elmberg Co., Parkersburg, Iowa.

to the regular brake lever. The bands are duplex acting and the lining is Raybestos. The necessary supporting fixtures are provided. Price \$10 per pair. —Raybestos Co., Bridgeport, Conn.

comes in contact with the air through any leak. Price, large size \$1.50; Ford size 75 cents. —"X" Laboratories, 646 Washington Street, Boston.

**BENFORD'S GOLDEN GIANT SPARK PLUG**

This is a plug with a blue-adamant insulator, nickel electrodes and a gold-plated shell. Special copper-asbestos gaskets are designed to hold the heaviest compression. —Benford Mfg. Co., Mount Vernon, N. Y.

**MIAMI TRAILERS**

These are built in many types for various service. Features are Timken roller bearing axles, shock-absorbing drawbars, solid rubber tires on artillery wheels, oil-tempered semi-elliptic springs and load capacities ranging from 800 to 3000 lbs. —Miami Trailer Co., Troy, Ohio.

**RAYBESTOS EXTERNAL EMERGENCY BRAKES FOR FORDS**

This is a set of external contracting brakes that operate on the existing drums of the Ford and are connected by pull rods

**"X" LIQUID RADIATOR CEMENT**

This is a liquid radiator cement to be poured into the cooling water through the radiator filler. It combines with the water and solidifies when it

**GEMCO EMERGENCY MUD HOOKS**

These mud hooks for passenger car or truck use are strapped to the outside of the tire, the projecting part enabling the wheel to get a hold in soft ground. Two hooks are recommended for each wheel. Size No. 1 is for 3 and 3 1/2-in. tires, No. 2 for 4 and 4 1/2-in. tires and No. 3 for 5, 5 1/2 and 6-in. tires. Price per set of two, any size, \$1.80 with straps, \$1.10 without straps. —Gemco Mfg. Co., Milwaukee.

**STEWART V-RAY SEARCHLIGHT**

This is a spotlight that can be turned in any direction and also be used as a trouble lamp. An attaching bracket fits all standard windshields. It has a 6-in. reflector and a 3-in. reducing mirror. —Stewart-Warner Speedometer Corp., 1826-52 Diversey Boulevard, Chicago.

**HOLLEY MANIFOLD FOR FORDS**

This is an intake manifold for Fords which is heated by the exhaust to vaporize low-grade fuels. Part of the exhaust goes through a jacket which surrounds the intake, the amount being controlled by the damper which is operated from the dash. Can be installed easily without machine work. —Price \$9.50, primer \$4 extra. —Holley Carburetor Co., Detroit.

**STERLING SPARK PLUG**

The main feature of this plug is that its parts are readily separable and thus may be cleaned and re-assembled without trouble. For the same reason worn or damaged parts can be easily replaced. Porcelains are of liberal size and the nickel-alloy one-piece electrodes are also of ample dimensions. Price 75 cents. —Lockwood-Ash Motor Co., Jackson, Mich.

**NO. 5 JIFFY TRUCK JACK**

This is a truck jack with a capacity of 5 tons. Made of malleable iron and steel. The base is extra broad and the upright ribbed. Range from 12 to 19 in. on top, 5 to 12 in. on step. Price \$8. —Jiffy Jack Co., Cleveland.

**KEENE TIRE PUMP**

This is an engine-driven pump of valveless type and may be had in either gear or shaft drive style, the latter being detachable. Fittings for different makes of cars are stocked. Price \$15. —Keene Mfg. Co., Keene, N. H.

**LANE'S JACK**

This is a short-handled jack with the reversing switch on the jack itself. The lift bar is wrought steel with milled notches and the frame of plate steel. Made in six sizes at prices from \$2.25 to \$3.75. —Lane Bros. Co., Poughkeepsie, N. Y.

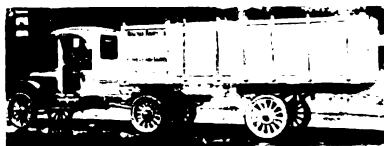
**TROY TRAILERS**

These trailers are of the 4-wheel type and are made in a variety of capacities and fitted with bodies suitable for the work they are intended to perform. —Troy Wagon Works Co., Troy, Ohio



**FRUEHAUF TRAILERS**

These are made in various types and in capacities of from 1 to 10 tons. Illustration shows a 6-ton semi-trailer hauled by a 2-ton Republic tractor. This unit operates over a 30-mile route twice daily, the load varying from 6 to 8 tons. This model trailer sells for \$1,050.



Fruehauf Trailer

**EASYSEAT CUSHION RECOVERINGS**

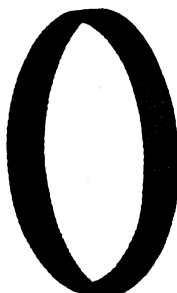
This is a hair-stuffed pad that slips over the old worn seat and is secured by a draw string which is sewed into the drops on the sides. These side drops are sewed to the pad itself with a corded welt seam. Price \$4.50 for Ford front or rear seats.—Holden Mfg. Co., 409 North Franklin Street, St. Paul, Minn.



Easyseat Cushion Recovering

**GEISEL'S ENDLESS WEB BELT**

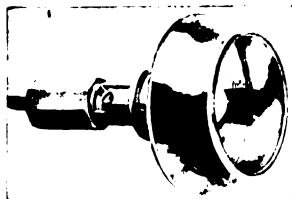
This is an endless web fan belt made of unstretchable fabric treated with a rubberizing process. The joint is spliced, sewed, rubberized, vulcanized and pressed.—Otto E. Geisel, 1202 Oxford Street, Philadelphia.



Geisel Belt

**CELL-BEAM CONCEALED SPOTLIGHT**

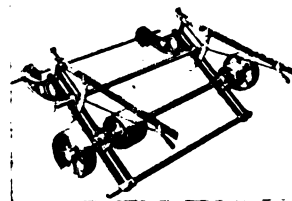
This is a small spotlight that is intended to be carried in the pocket of the car instead of on the windshield. It has an extension cord for use as a trouble lamp. It throws a concentrated beam 500 ft. and diffused light near by.—Cell-Beam Corp., 501 Fifth Avenue, New York City.



Cell-Beam Spotlight

**LAY PORTA POWER**

This is a device to utilize the power of a car for belt work. The rear axle of the car is lifted by the device and the wheels revolve with the tires against driving pulleys which transmit the power to a shaft and thence to the belt pulley. Price \$49.—L. A. Young Industries, Inc., Detroit.



Lay Porta-Power

**NEW KILBORN SAUER SPOTLIGHT**

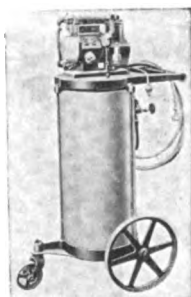
Model 112 M spotlight has a 4-inch diminishing rear-view mirror, the bracket permits of the light being turned in any direction and the switch is of push-and-pull type. The bracket is so designed as to eliminate wiring troubles. Price \$9, or without mirror, \$8.—Kilborn-Sauer Co., Fairfield, Conn.



Kilborn-Sauer Spotlight

**THE LECTROFLATER**

This is a free air unit consisting of a compressor and electric motor combined. All moving parts are enclosed in a metal housing and the outfit uses any form of current. Made in two capacities and obtainable with portable or stationary tanks. Prices from \$65 up.—Black & Decker Mfg. Co., Baltimore.



Lectroflater

**CARBORUNDUM VALVE GRINDING COMPOUND**

This is a fast-cutting valve-grinding compound made in coarse and fine grades. It is



Valco Plug



Schrader Gage

**VALCO SPARK PLUGS**

The porcelains used in both Giant and Junior Valco plugs are of imported clay, the heavy shells are finished in nickel and center stems of steel reinforce the central electrodes almost down to the firing point. The open shell with large recesses around the base minimize trouble from fouling. Prices, Giant, \$1; Junior, 75 cents.—V. A. Longaker Co., Indianapolis.

**SCHRADER UNIVERSAL TIRE PRESSURE GAGE**

This gage contains a large air chamber which has but one opening. When testing the pressure this chamber and that of the tire become one combined, continued chamber so hermetically connected that no leak is possible. The inner mechanism insures that the indicating sleeve remains at the point to which it has been forced by the air pressure.—A. Schrader's Son, 783-791 Atlantic Avenue, Brooklyn, N. Y.



Buffington Jack

**BUFFINGTON TIRE-SAVING JACK**

This is a quick-acting jack to raise the wheels off the floor. It is adjustable to any height wheel. Finished in black enamel. The lifting is done by a straight leverage caused by pushing down the handle with the foot.—C. A. Buffington & Co., Berkshire, N. Y.



Woman's Motor Coat

**MOTRING COAT FOR WOMEN**

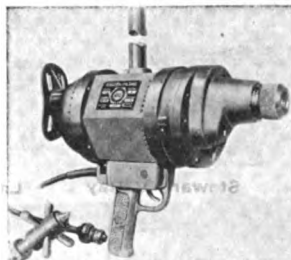
This is a full length Bolivia cloth, in various colors, deep cuffs, large side pockets and detachable flying squirrel collar. Interlined and lined throughout with fancy silk. Price \$87.50.—C. Kenyon Co., Inc., Fifth Avenue Building, New York.



Lyon Tire Holder

**B & D PORTABLE ELECTRIC DRILL**

This is a portable electric drill with a pistol grip and a trigger switch. It is balanced, automatically cooled and all bearings are automatically lubricated. Made in several sizes to take drills from 0-1/4 in. Price \$56 up. Black & Decker Mfg. Co., Baltimore.



B &amp; D Electric Drill

**LYON TIRE HOLDER**

This tire holder is made of steel, without adjustable parts. It is furnished with a strapless lock and holds one tire with rim. Price \$5 for runabout or \$5.50 for touring car or sedan. A type for Fords sells for \$5.50. runabout or \$6 for touring car or sedan.—Metal Stamping Co., Long Island City, N. Y.



Gilmer Rebound Strap

**GILMER REBOUND STRAPS**

These are endless straps made of woven fabric, the top part being led through a suitable bracket attached to the frame of the car, and the bottom part placed around the axle.—L. H. Gilmer Co., Philadelphia.

mixed with grease to the proper consistency. Tubes 35 cents, combination cans 49 cents, 1-lb. cans \$1.25.—Carborundum Co., Niagara Falls, N. Y.



**J. H. TONNEAU SHIELD**

A folding windshield which is attached to the back of the front seat for the protection of the occupants of the rear seats. It is easily put up or down, and can be swung back close to the rear seat. The side wings can be placed in any position, and are held there by friction. Made with mahogany frame, nickel frame or black frame with nickel fittings. Price \$60 for any kind of frame.—Tonneau Shield Co., Inc., 1777 Broadway, New York City.



J. H. Tonneau Windshield



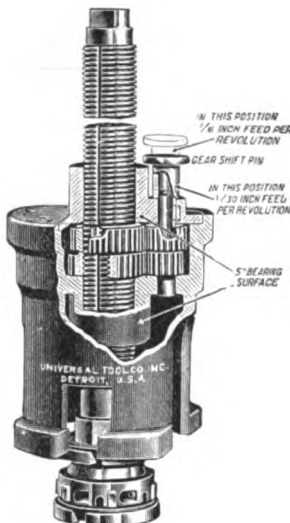
Powersteel Truckline

**POWERSTEEL TRUCKLINE**

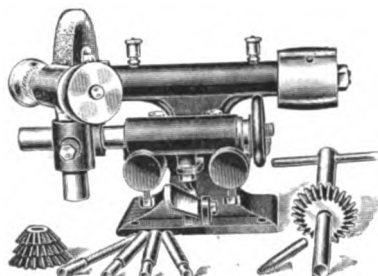
This is a towline for trucks and heavy towing. It is made of 1/4-in. wire rope about 18 ft. long, with forged hooks spliced in the ends. Manila or wire rope slings provide means of attachment. The hooks can be had with or without snaffles. Price \$10.—Broderick & Bascom Rope Co., St. Louis, Mo.

**UNIVERSAL CYLINDER REBORING TOOL**

This is a cylinder reboring tool in which the cutter is turned by a wrench or by power, the advancement of the tool or the feed being either the same as the thread on the screw, or by means of a back gear, at a much slower speed. In operation, the case of the tool is clamped to the cylinder base and the cylinder rebored. Made in six sizes, the entire six having a range of expansion from 2 1/2 to 5 1/16 in. A special size for Fords sells for \$125, and a special size for Dodge cars is \$125. The other models range in price from \$150 to \$225.—Universal Tool Co., Inc., Detroit.



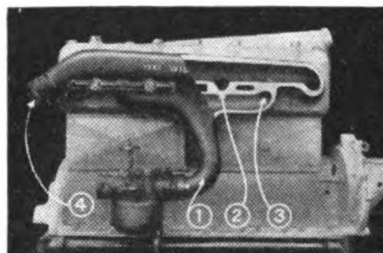
Universal Cylinder-Reboring Tool



Nasco Valve Grinder

**NASCO VALVE GRINDER**

This device is a grinder stand with a 5-in. emery wheel and a guide for the valve stem which holds the valve at the correct angle against the wheel to grind off the face. A nut acts as a stop to the valve stem so that it will be ground in a true circle. The complete outfit includes all necessary parts to properly grind off the faces of any sizes valves and a set of valve-seat reamers for all sizes of seats. Price \$40.—National Auto Specialty Mfg. Co., Tama, Iowa.



Wilmo Manifold

**WILMO MANIFOLD FOR FORDS**

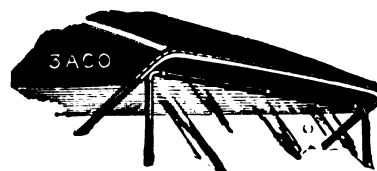
This is a combined intake and exhaust manifold for Fords, the exhaust heating the walls of the intake passages so that the mixture is super heated. No machine work or changing is necessary as the combined manifold exactly fits in the place occupied by the two original manifolds and is clamped on with the same clamps. Price \$9.50.—The Whittier Co., 2332 Michigan Avenue, Chicago.

**POWERSTEEL AUTOWLOCK**

This is a device to lock the car, spare tires, etc. It is made of 4 ft. of wire rope wrapped with a strong waterproof cord fabric, the ends of the rope being spliced around heavy eyes or thimbles. A padlock snaps through the two thimbles. Price \$2.25.—Broderick & Bascom Rope Co., St. Louis, Mo.



Powersteel Autowlock



3-A Anti-Draft Shield

**3A ANTI-DRAFT SHIELD FOR FORDS**

This is a shield that fills in the gap between the top of the windshield and the front bow of the top on the Ford. Made of imitation leather, and can be attached in a few minutes by tacking the top to the bow and clipping the lower side over the top of the windshield molding. Price \$1.50.—American Automobile Accessories Co., Cincinnati, Ohio.

**HINDVIEW MIRRORS**

These are small mirrors that enable the driver to see what is going on behind his car. They are made in a variety of models and sizes, special truck models being made with 22-in. arms so the mirror will clear the load or body of the truck. Made either with plain glass mirror or lens mirror, which increases the field 50 per cent without distorting the image. Prices from \$2 to \$4.75.—Kales Stamping Co., Detroit.



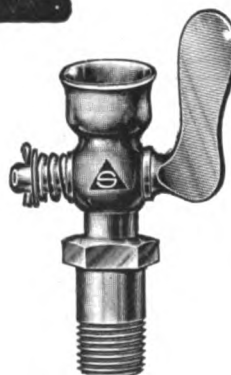
Hindview Mirror



Fawco Oil-Cock Wrench



Roberts V-Type Priming Cup



Roberts Vertical Priming Cup

**ROBERTS V-TYPE PRIMING CUP**

This is a priming cup for V-type engines. The cup is at an angle with the shank of the cup so that it will be level when installed on the engine. Made of heavy brass composition and fitted with a washer and spring. Price 50 cents each. Packed 10 in a box.—Stevens & Co., 375 Broadway, New York City.

**ROBERTS VERTICAL PRIMING CUP**

This is a heavy brass composition priming cup with machined parts and a ground key secured by a washer and spring

which prevents loss of compression and eases turning of the lever. Price 40 cents each. Packed 10 in a box.—Stevens & Co., 375 Broadway, New York City.

**FAWSCO OIL-COCK WRENCH AND GASOLINE GAGE FOR FORDS**

This is a metal tool with a clip on the end which turns the oil cocks on the Ford crankcase without the necessity of reaching under the car. A pin placed at the same end clears the hole in the cock if it is stopped up. The handle of the tool is graduated to measure the gasoline in the tank. Packed 12 to a carton, one of them being mounted on a display easel and the balance in separate envelopes. Price 45 cents each.—J. H. Faw, Inc., 37 Warren Street, New York City.

**USL STORAGE BATTERY**

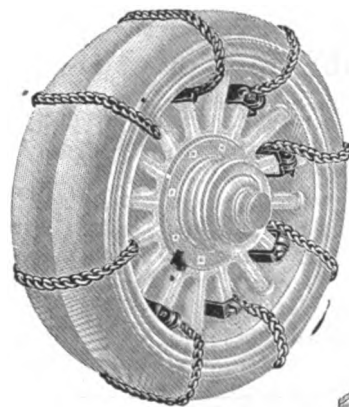
This is a storage battery for ignition, starting and lighting. The plates are machine pasted and the molded hard rubber covers with the rubber raised all around the metal parts prevent surface short circuits. An improved filling and vent device prevents spillage. Made in a variety of voltages, capacities, shapes and terminal styles at prices from \$24 to \$70.—U. S. Light & Heat Corp., Niagara Falls, N. Y.



USL Storage Battery

**THOMPSON CARBURETER**

This device employs an insulated resistance wire placed in the bowl of the carbureter, the wire becoming hot and thus heating the gasoline when the current is turned on. It can be attached to any existing carbureter by means of two 1/4-in. insulated plugs, the connecting switch being placed on the dash. Made for either 6 or 12-volt systems. Price \$4.50.—Thompson Mfg. Co., 310 Second Street, Des Moines, Iowa.



Arrow Grips

**ARROW GRIPS**

These are anti-skid devices for trucks and tractors, and consist of a clamp which goes around each spoke and a chain which goes around the tire and felloe and hooks into hooks on the clamp. The clamps are divided and bolted to the spokes and a latch permits the attaching or detaching of the chains, the clamps being left on at all times. Prices of single grips, \$1.50 to \$2.10, depending on size or shape. The chain is \$22.50 to \$35 per 50 ft., depending on size of links and diameter of metal.—Arrow Grip Mfg. Co., Glens Falls, N. Y.



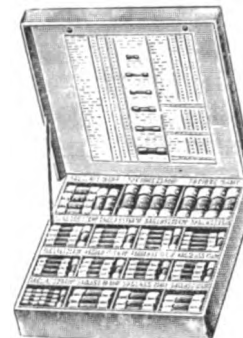
Baseline Autoline

**BASLINE AUTOWLINE**

This is a wire-rope towline made of 1/4-in. yellow strand wire rope about 20 ft. long with patent snaffle hooks for attaching and rope slings. It is strong enough to pull a 4000-lb. car up a 20 per cent grade. Weight 4 1/2 lb. Coils up flat. Price \$4.95.—Broderick & Bascom Rope Co., St. Louis, Mo.



Cochran Pipe Wrench



Union No. 2 Fuse Set

**COCHRAN PIPE WRENCH**

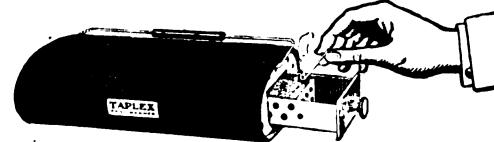
A pipe wrench in which the compression strain comes on the strongest part of the wrench, the compression strain being taken from the nut by a rocker instead of by a pin. Prices and sizes are: 6-in. taking up to 1/2-in. pipe, \$2; 8-in. taking 1/2-in. pipe, \$2.25; 10-in. taking 1-in. pipe, \$2.50; 14-in. taking 1 1/2-in. pipe, \$3.50; 18-in. taking 2-in. pipe, \$5; 24-in. taking 2 1/2-in. pipe, \$7.25; 36-in. taking 3 1/2-in. pipe, \$13.50.—Cochran Pipe Wrench Mfg. Co., Seventy-eighth Street & Woodlawn Avenue, Chicago.



Cochran Speednut Wrench

**UNION AUTOMOBILE FUSES**

These are fuses made for automobile starting, lighting and ignition circuits. They are made with either fiber or glass tubes and in a large variety of sizes and capacities for different cars. The No. 2 assortment consists of 200 fuses with glass tubes packed in sub-divided cases and selected to meet average requirements. Price \$15. The individual fuses range in price from 5 to 35 cents.—Chicago Fuse Mfg. Co., 1014 West Congress Street, Chicago.



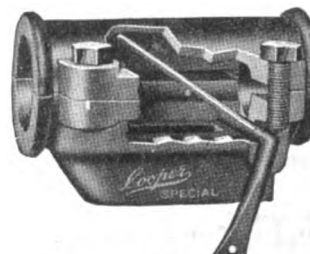
Taplex Foot Warmer

**TAPLEX FOOT WARMER**

This is a foot warmer for automobile use, the heat being generated by slow-burning brick fuel which can be lit with a match. The body is steel, ends Nickel plated, double asbestos lining and covered with velvet plush in different colors. Length 20 in. Price with 12 bars of fuel, \$7.50.—Taplex Corp., Broadway & Thirty-fourth Street, New York City.



Gemco Windshield Visor



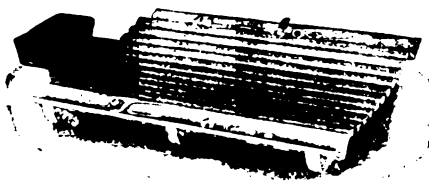
Cooper Muffler Cutout

**COCHRAN SPEEDNUT WRENCH**

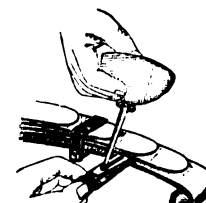
A quick-acting wrench in which the opening of the jaws is controlled by the angle of the handle. The harder the handle is pulled the tighter it grips the nut. Turning the other way, the wrench ratchets. Made in two sizes. The 6-in. size takes nuts 1/4 to 3/8 in. and the 8-in. size takes nuts 3/8 to 1/2 in. Packed 12 in a corrugated paper carton, 6 doz. in a wooden case.—Cochran Pipe Wrench Mfg. Co., 7800 Woodlawn Avenue, Chicago.

**GEMCO WINDSHIELD VISOR FOR FORDS**

This visor is the third part of the windshield and swings outward to prevent the elements from reaching the glass of the regular windshield. It is fitted with ratchets to allow for adjustment to any angle. The width is 7 in. The visor for the touring car and roadster clamps on the existing shield, the model for the sedan is screwed to the shield or the top. Price \$10.80 for either model in plate glass, \$9.70 in crystal glass.—Gemco Mfg. Co., Milwaukee.



K &amp; E Auto Crawler



Cochran Spring Oiler

**K & E AUTO CRAWLER**

This is a crawler for working under a car. The headrest is upholstered and there is a channel in each side for tools or parts. Made of hardwood and equipped with ball-bearing castors. Size 22 x 36 in. Price \$2.—Kund & Eiben Mfg. Co., Pittsburgh, Pa.

**COCHRAN SPRING OILER**

This is a spring oiler in which the wedge is driven between the leaves of the spring, forcing them apart. Oil is then dropped in the little well and it runs down the channel between the leaves.—Cochran Pipe Wrench Co., 7800 Woodlawn Avenue, Chicago.

**COOPER MUFFLER CUTOUT**

This is a muffler cutout with a flapper valve. The body of the cutout is split and clamps around the pipe, a hole being cut in the pipe to let the gas out when the valve is open. The flapper deflects all the gas through the hole when it is open. Made in sizes to fit pipe from 1 1/2 to 2 1/2 in. at prices from \$2.25 to \$3.75.—Cooper Mfg. Co., Marshalltown, Iowa.

# Old Line Implement Trade Alarmed Over Automotive Dealer

*Sees Its Business Going Because of Modern Methods of Men from Motor Car and Allied Fields—Implement Factory Men Tell Implement Dealers They Must Be Better Merchandisers—Dealers Say Tractor Business "Belongs" to Them*

The old line implement trade is alarmed at the entry of the automotive dealer into the tractor and implement field.

The old line dealers, who for a generation have sold on poor business lines and without service, are threatened with extinction.

The manufacturers realize that there must be better methods than the old line implement dealers have ever given.

The manufacturers recognize that the automotive dealer has demonstrated his fitness for tractor distribution and service—and with it the sale and service of power farm machinery.

THIS state of affairs has been uncovered by the implement people themselves. The cover came off in a dramatic meeting of the manufacturers and dealers in Chicago last week. The manufacturers bluntly stated that the old line dealers are dead ones unless they become more alive than they are now.

In return the old line dealers asserted that the tractor business "belongs" to them because they are the "logical" people to handle it. But the "logical" side of it did not appeal to the manufacturers, who declare that the tractor is more like an automobile than a farm implement, and is NOT in the implement class.

"But you want us implement men to handle them," declared a dealer.

"Make an agricultural implement out of it if you will," replied the factory man, "but if you do then take hold of it and handle it RIGHT—and God be with you."

All of which was the dramatic climax of one of the most important meetings that has been held in the tractor trade in years. And the sum of it all is that the implement dealers—and some of the old line factories with them—are going to fight the entry of the automotive dealer into the tractor field and will do what they can to sew this business up with the old line implement crowd.

---

## What the Implement Dealers Resolved

*Resolved: That a really serious situation confronts the implement dealer in tractor conditions. Power farming is an assured fact. Other industries are bidding for the tractor business, and with it will very naturally follow all tractor-drawn machinery.*

*The federation would warn its members of the necessity of being wide awake to this fact and would encourage the discussion of the subject at all the coming conventions with the idea in mind of forcibly showing the necessity of prompt action to avoid the loss to the trade of this valuable line of business which rightfully belongs to the implement dealer.*

---

In fact, the fight has been on for some time. Some of the things that have been done, or that have the appearance of a motive behind them, will surprise the trade when the real facts are known. Some of these things will be told in coming issues of Motor World.

### THE AUTOMOTIVE DEALER MUST FIGHT.

This uncovering of the alarm that exists in the implement trade came out as follows:

Each year the Sales Managers' Division of the National Implement and Vehicle Association—the manufacturers—meets at the same time as does the National Federation of Retail Implement Dealers' Associations. Thus, the makers and dealers are in session at the same time. The sessions were at the La Salle and Sherman Hotels respectively last week in Chicago.

Also, the sales managers each year select what they consider the most important subject of the year to be discussed in a joint meeting.

The subject selected by the sales managers was: "What will the National Federation (which represents the old line implement dealers) do to induce retail implement dealers to maintain themselves in the implement trade by dominating the tractor and power machinery business?"

In other words, if you don't dominate the tractor business you are going to be wiped out.

R. B. Laurie, sales manager of the John Deere Plow Co., Moline, Ill., had been selected by the Sales Managers' Division to present the viewpoint of the farm equipment manufacturers.

He said, substantially: "Unless the

National Federation finds a way to induce the retail implement dealers of the country to take on tractors and power farm machinery and to handle them in the right way, then the retail implement dealers who sell only horse-drawn equipment are doomed to extinction. Many retail implement dealers all over the country will not go into the tractor business, and thus the selling of tractors and power farm equipment is getting into other hands.

"The dealer who sells tractors will sell also a large proportion of the power equipment as well. With tractors and power equipment in the hands of motor car dealers and others so much of the good and profitable trade will have been taken away from the horse-drawn equipment dealer that he will be forced out of business.

"It may be interesting in this connection to know the results of a recent investigation undertaken by my company—the John Deere Plow Co.—among our dealers. We found that 60 per cent of our implement dealers' agents in the States of Iowa, Illinois and Wisconsin do not handle tractors.

"Furthermore, of the 40 per cent who do handle tractors only a portion ordinarily stock tractors and handle them properly. It is interesting to know, too, that of the total number in these three states only 4 per cent sell the Ford car.

"As manufacturers of farm equipment we call upon the National Federation to do something to stimulate the dealers belonging to the constituent associations to get busy in the tractor business if they do not want to see it go into the hands of motor car dealers. The decision is squarely up to them.

"It is necessary and absolutely vital for the retail implement dealer, if he wants to continue in the trade, to add tractors and power equipment to his present horse-drawn lines. *Also the implement dealer must add the service which goes with the tractor business, and this, gentlemen, will take A-1 dealers. Now what are you going to do?*"

R. L. Stebbins, Hancock, Minn., replied for the Federation. He made no effort to tell what the Federation could or would do in the emergency, but contented himself with the assertion that the tractor business "belongs" to the retail implement dealer because the latter is the "logical" man to handle it.

Stebbins admitted that a gap exists between the manufacturer of tractors and the farmer which the retail implement dealer ought to fill and which by training and experience he is qualified to fill. The speaker claimed that the implement dealer is acquainted with those things which it is essential for the tractor dealer to know, such as soil conditions, how to set a plow, how to co-ordinate pulley sizes, how to operate a silo filler, a threshing machine, a corn sheller, etc. Because the implement dealer knows these things he has the knowledge which qualifies him to be the best distributor of tractors, and for that reason he should be given control of the tractor trade.

T. J. Turley, Owensboro, Ky., the second speaker in behalf of the Federation, said that there are implement-tractor dealers who will stay with the tractor business, and with whom the tractor manufacturers can stay, but such dealers must have the right kind of tractors.

If the good implement dealer is given an exclusive contract with an exclusive line he will win, but it is discouraging for the well meaning dealer to find himself in competition with his own goods. This condition frequently happens as respects tractor plows. Plow manufacturers make plows which can be used behind any tractor, and frequently more than one dealer in a town will be selling the same plows. Implement dealers object to this. Also some tractor manufacturers who have not been able to secure dealer representation have installed farmer agents. Again the implement trade objects.

Implement dealer or automobile dealer? Well, the "garage man" is a good fellow and the implement dealer is glad to help him out. But the average "garage man" does not know how to line up a plow and the implement dealer has to come to his assistance. He is glad to do this, because it often happens the implement dealer has some of the same kind of plows to sell and he cannot afford to have one of them fall down.

The tractor trade belongs by rights to the implement dealer, said Turley, and he promised in behalf of the National Federation that *whatever it was possible to do to arouse the implement dealers would be done.*

The occasion was dramatic and the blunt declaration of Laurie created a sensation. It was the first public and official recognition given to the fact that motor car interests promise to dominate

in the tractor field and precipitate a new alignment in the implement business.

Coming from the manufacturers of farm operative equipment, with the prominence of the men selected to present the subject, the incident was pregnantly significant. The time, too, gave added significance, for the time was the annual joint conference between representatives of the farm equipment manufacturing industry and representatives of the organized retail implement trade. *This conference is justly considered by both to be one of the most important of the implemental events of the year.*

This is so because of the importance in the trade of the two bodies of men which conferred, the sales managers, representing practically the entire farm equipment manufacturing industry of the country, and the delegates from all of the leading associations of retail implement dealers in the country.

The Sales Managers' Division of the National Implement and Vehicle Association is composed of the sales managers of practically all of the concerns of large importance engaged in the business of manufacturing agricultural implements. Probably the men composing this division fix the policy which governs the sale of more than 90 per cent of all of the farm operative equipment made in this country.

#### Final Action by Sales Managers

*Final action by the sales managers is regarded as almost obligatory by the concerns they represent.* Added importance is given opinions of this body by reason of the fact that it is most directly in contact with the retail dealers who are looked to as the ultimate distributors of farm equipment.

The National Federation of Retail Implement Dealers' Associations in turn is the supreme body in the organized implement retail world. It corresponds to a grand lodge. It is a delegate body meeting but once a year. It is composed of regularly accredited representatives from all the state associations of retail implement dealers throughout the country. The numerical aggregate of retail implement dealers represented by the state associations, and by delegates in the National Federation, is about 16,000, more than half of the recognized retail implement dealers in the United States.

It is claimed, furthermore, that these 16,000 represented dealers sell better than 75 per cent of all the agricultural implements sold in the country. This assertion is based upon the fact that the National Federation represents state associations which are located for the most part in the vast agricultural country lying between the Rocky and the Allegheny mountains.

These two important and representative bodies, the Sales Managers' Division and the National Federation, meet contemporaneously once every year. One session is a joint meeting. Each organization sends to the other in advance of the joint conference a list of subjects which it appears desirable to discuss in order that sales managers and dealers may reach accord, if possible, upon trade

policies which affect both. This joint conference is highly regarded by both. *What takes place at that conference is likely to make implement history.* There is a frank interchange of opinion. Manufacturers and dealers, through their accredited representatives, meet face to face and let the bars down. *Policies momentous to the implement trade have been determined upon at past conferences; policies equally momentous will be determined at future conferences.*

#### Discount for Repairs

That was the stage upon which the drama of last week was played.

A second subject for discussion at the conference was the discount of repairs and the C. O. D. plan of shipping. As regards the latter the dealers demanded its abolition, both because to send repairs C. O. D. to a reputable dealer implies a reflection upon his credit and his integrity, and because it operates to increase the cost of essential repairs to the farmer.

It developed in the course of the discussion that the C. O. D. condition pertained principally to tractor repairs. This precipitated the second dramatic incident of the day. One dealer remarked that sending repairs for an agricultural implement was contrary to the traditions and practices of the implement trade.

This brought F. G. Allen, president of the Moline Plow Co., to his feet with the interjection:

*"The tractor is not an agricultural implement; it's more like an automobile, and it and its accessory parts should be sold in the same way as is an automobile."*

"But you want us implement men to handle them," exclaimed a dealer.

"All right," returned Allen, *"make an agricultural implement out of it if you want to, but if you do then take hold of it and handle it right and God be with you."*

#### Importance of Service

The importance of service and the necessity for the dealer equipping himself to render it in the fullest measure occupied much of the time of the sales managers and of the dealers. It was pointed out that the restrictions on material for farm implement production in 1919 would so reduce numerically the number of available agricultural implements that a larger proportion than usual of old machines would have to be repaired and put into a condition to use.

In furtherance of this idea the Federation and the Sales Managers' Division will agree on a week in March, 1919, to be set apart as National Farm Equipment Repair Week, during which it is hoped to induce every farmer to overhaul his equipment and to secure repairs to put it all into working condition.

The Federation also passed a resolution calling upon the members of the constituent associations to file specifications for the goods they will need in 1919 "early," meaning at once. This was adopted at the request of the Sales Managers' Division.

# No Link in the Chain of Trade Must Let Go

*Jobbers as Well as Dealers Should "Carry on" if Automotive Industry Is to Get by During the Next Six Months and Year*

ON pages 10 and 11 of this issue Motor World tells dealers how they can get by during the coming difficult months.

And on pages 8 and 9 it states that what is needed above all things is a good injection into business of the "will to win." It applies to jobbers as well as to dealers. Let's not let the Kaiser have a monopoly of all this "Will to Victory" stuff. He tried it and couldn't get away with it. Let's show him how it ought to be done.

THE jobbing trade is having its troubles, like the rest of the industry, but the leaders are figuring on "carrying on" in the face of handicaps.

With the jobbers' convention and exhibit off there is greater need than ever for the dissemination of the spirit of solidarity and continued progress throughout the trade.

A few jobbers have expressed sentiments that are somewhat in the "inactive" class, but others declare that the jobbing trade has a duty to perform to the dealers and to the country and that the jobber **MUST** stick if he is to merit business in the after-victory period.

Dealers and jobbers should co-operate more closely. Dealers should sell for cash and should discount bills or use the trade acceptance. Jobbers should act as business advisers as well as sell goods.

These thoughts—and the big thought of "carry on"—are expressed in letters received by Motor World in answer to a letter of inquiry to several leading jobbers. Some of the jobbers said they were loath to predict as to the future, while others declared that the whole trade can get by if it all gets together and TRIES.

Regardless of the problems, the "carry on" jobbers are going to do their utmost to maintain their position in the trade and to continue the service they have given heretofore as far as is possible.

From the big broad West where Iowa was first over the top on the Fourth Liberty Loan comes a "carry on" message from Lee L. Wissler of the Herring Motor Co., Des Moines. He says: *"It is our intention to attempt to carry on business just as near usual as possible without in any way violating any of our agreements with our Government."*

"We feel that this can and should be done, and, inasmuch as business is good, stocks about as usual and we are experiencing no difficulty in getting merchandise, except in a few cases, we shall have no trouble in putting it over."

"Iowa was the first State to go over the top in the Fourth Liberty Loan—the same was true in the Third—and with this done we feel that our next duty is to endeavor to stimulate all business possible in order that we may be prepared to take care of the Liberty Loans that follow."

"Understand us, we do not solicit business in large quantities. We do not approve nor do we allow the hoarding of stocks. Each order is audited and the customer is given only what we consider necessary for his actual immediate requirements."

## Dealer Will Continue

"We think the dealer should do business, and see no reason whatever why he can not. There are as many cars in use now as there have been heretofore, and all of them, both commercial and passenger, must be kept moving this winter on account of the shortage of men. These cars will need all kinds of winter specialties as well as other parts and accessories ordinarily used in the maintenance and upkeep of cars."

"As we see it there is just one thing that might seriously affect the dealer's business, and that is the possibility of our Government being obliged to stop, or curtail, for any reason the use of passenger cars. If this is necessary, then well and good, we shall co-operate in every respect, but we believe there is no cause for alarm."

"The jobber can be of much assistance to the dealer by keeping him properly posted on winter specialties and the proper methods for selling them."

"The dealer, we feel, should expect from us the same help and co-operation he has formerly received. We feel that

it is due him more particularly at this time, and while we have heard that certain jobbing houses have or are considering removing their salesmen from the road we fail to see that it is either necessary or practical or that it is in any way fair to the dealer or a patriotic move, because if the Government needs our men they will take them—and they are welcome to them. But those men that the Government does not care to use should be kept busy at home, making business good."

And, says Theo Bass, of the National E & A Supply Co., Peoria, Ill.: *"I am somewhat surprised that the dealers with whom I have talked are not more pessimistic on account of not being able to get cars. They seem to be getting by and expect to get by by realizing a full profit with very little expense for service on what cars they do sell, and by keeping their repair departments and accessory business at the highest point of efficiency."*

"The dealer is looking to the jobber for service and co-operation more now than he has in the past. Any part that can be furnished from a jobber's stock, such as coil replacements, ball-bearing replacements and some other items that he has heretofore bought from the manufacturer of the car, he will expect the jobber to furnish him and the jobber should, as far as possible, put himself in position to furnish this service."

"The jobber," Bass continues, "should co-operate with the dealer to help the dealer get by. We have been passing on to our dealers any ideas that have come to us for making up the loss they will incur by not getting cars. For instance, we do not handle the equipment for making Fords to carry seven passengers as the proposition is not one that appeals to a jobber, but we have been referring the matter to dealers, suggesting that they get in touch with these people and work the 7-passenger Ford idea where conditions will justify it."

"We have also encouraged our dealers to get in touch with the tractor trade and the supplying of materials that are used on tractors, some of which we are



able to supply, and some of which we are not.

"Considering the abnormal conditions under which we are operating, the outlook for the jobbing trade during the next six to twelve months looks very favorable. Of course, for the next six months the conditions will depend largely on the weather. If we have another winter like last winter business will naturally be poor, especially for those jobbers who serve the country garage trade as we do."

"The most important thing for jobbers to do is keep the dealer supplied with essential merchandise to sell," states George B. Shearer, of the Gaul, Derr & Shearer Co., Philadelphia. "This incidentally involves an obligation on the dealer's part to help the jobber in a financial sense by taking care of his accounts promptly, either by discounting his bills or by using the trade acceptance."

"The jobbers' stocks are already unbalanced to a large extent through inability to get certain material. This condition will certainly not improve within the next six months. The jobbers are all carrying big stocks, but they are not nearly as well assorted or adapted to the immediate needs of the trade as they should be."

"These big stocks involve the investment of considerable capital, and *prompt payment is going to be the controlling factor in maintaining both jobbers' and dealers' stocks.*

"Many jobbers are making specialty salesmen out of their roadmen. We have been doing this to a limited extent and may have to do it to a greater degree as the supply of staples becomes exhausted. The dealer would do well to study this particular phase and fall in line with the jobber by pushing utility specialties to help carry his overhead."

"In addition to pushing his accessory or equipment department for all it is worth the dealer should particularly play up his repair department and *should adjust his charges to a level where this work will return him a profit.* There certainly will be enough repair work to be done this coming winter."

#### 5000 Trucks to France

WASHINGTON, Oct. 10—Five thousand motor trucks were shipped to France during the month of September, according to a statement made by the Acting Secretary of War, Benedict Crowell, yesterday. Practically all of these were knocked down, although some were carried on decks.

#### Des Moines Goes Over Big

DES MOINES, Oct. 12—The motor trades team for the Fourth Liberty Loan went over the top with flying colors. A total of 1261 applications were secured, amounting to \$366,000 in bonds. In the Third Loan campaign the amount sold by the team was \$300,000.

## Detroit Territory Gets 35% of Class B Truck Order

### Michigan and Ohio Secure Orders to the Value of \$26,250,000 on War Trucks

DETROIT, Oct. 12—Thirty-five per cent of the order for Class B trucks recently placed by the government will be produced in the Michigan-Ohio territory. Every manufacturer is rapidly adjusting his facilities to get into early production and it is expected that within 10 days all will be engaged on this work. The orders in this section represent a value of \$26,250,000. The companies awarded contracts in Michigan and Ohio are given in the following tabulation with their respective quantities of trucks to be produced:

United Motors.....	500
Signal .....	500
Denby .....	1500
Lewis-Hall .....	500
Republic .....	2000
Wilson .....	500
Clyde .....	500
United States Motor Truck.....	1500
Gramm-Bernstein .....	2000
Standard .....	750
Midland .....	500

Companies in other parts of the country awarded contracts follow:

Vim .....	500
Winther .....	500
Rockaway .....	1000
Diamond-T .....	2000
Bethlehem .....	1500
Rowe .....	500
Sterling .....	750
Indiana .....	1500
Maccar .....	500
Service .....	750
Atterbury .....	750
Vellie .....	2000
Selden .....	2000

Of those truck manufacturers awarded contracts in Michigan and Ohio nearly 75 per cent have not had government work within their walls.

#### Rubber Imports Drop

NEW YORK, Oct. 11—Imports of crude rubber continue to decline. The total to date from the first of the year is less than for the same period in 1917. During the first nine months of 1917 the total importations touched 136,325 tons, whereas during the first nine months of 1918 the total was 131,132 tons, which is a loss of 5193 tons.

Imports during September were less than half those for August, 5151 tons coming in during September as compared with 10,421 tons in August; this is a drop of 5270 tons. Imports during September, 1918, were considerably less than one-third the tonnage that came in during September, 1917, a comparison of these two months showing a loss of 8513 tons.

Practically the entire amount of September importations is allocated rubber, substantially all of the free rubber shipped prior to May 8, 1918, having reached this country. According to the rulings of the War Industries Board, importations of rubber have been restricted to 25,000 tons during the last quarter of

the year, which means that the monthly allowance is approximately 8300 tons. September, of course, dropped considerably below this figure, which means that the difference between the actual imports and the allowance will be permitted to come in during October. It is understood that there is quite a quantity of rubber on the seas and that imports will practically equal the quantity permitted to come in.

#### Canada Wants Gasoline Cards

MONTREAL, Oct. 11—So strong has become the demand from members of the Montreal Automobile Association to have the ban on Sunday driving withdrawn and the immediate issue of gasoline cards, that T. C. Kirby, the secretary of the association has paid a visit to Ottawa to interview Fuel Controller McGrath on the question.

Kirby pointed out that the issue of a card to each owner would not be such a very big matter and by each owner having a card and the allotment of a certain amount of gasoline, which could very easily be decided upon by a representative committee getting together, fair treatment would result to all. The owner would be allotted a certain amount of gasoline for consumption during each week of seven days, and, after having used this amount, no more would be obtainable except by a special permit and under exceptional circumstances. The owner could then use his allotment of gasoline exactly as he chose on any of the seven days.

By this means a real saving of gasoline would take place, more especially as the dealers are to be registered and will not be allowed to sell gasoline on Sundays, consequently the immediate issue of gasoline cards with a fixed allotment would overcome all the feeling and grievances at present existing by the ban on Sunday driving.

It was also pointed out that the present ruling of no Sunday driving was not fair to the smaller owner who could not drive on any other day of the week, but did not affect the richer owner who could drive on any week day, and did not feel the loss of his car on Sunday. The whole question was promised very careful consideration and there are very strong hopes for the requests being granted in the very near future.

#### Do You Know This Guy? We Do

"Who's the stranger, mother, dear?

Look, he knows us—ain't he queer!"

"Hush, my own, don't talk so wild;

He's your father, dearest child."

"He's my father? No such thing!

Father died away last spring."

"Father didn't die, you dub!

Father joined a golfing club.

But they've closed the club, so he

Has no place to go, you see—

No place left for him to roam—

This is why he's coming home.

Kiss him—he won't bite you, child;

All them golfing guys look wild."

—Cottrell's Magazine.

## Hire a Lawyer if Labor Boards Say Your Mechanics Must Change Their Occupations

**Peake Secures This Advice from Provost Marshal General's Office, Which Says Such Boards Exceed Authority**

To the Members of the Kansas City Motor Car Dealers' Association: I have just returned from Washington, where I went into the question of the Work or Fight order as it affects the automobile dealers.

While in the East last week I received a wire from F. W. A. Vesper, president of the N. A. D. A., asking me to go to Washington for this purpose. Many complaints have been received in Mr. Vesper's office owing to the position local draft boards have taken and also the position taken by labor boards as regards the automobile mechanic, etc.

I am sure that one question which is bothering you in these trying times is whether or not you will be able to keep your mechanics and salesmen who are in deferred classifications. Let me say to you point-blank that the Work or Fight order does not in any way affect anyone in the automobile business who is in class 2, 3 or 4 of either the first or second draft, unless it should be a floor salesman who does not go out over the city in making his sales, but virtually becomes a floor clerk; then this man might be affected.

All of this terrible scare is groundless so far as the law governing it is concerned. I received my information firsthand in Provost Marshal General Crowder's office Friday last. One need but to read the law of the selective service regulations which were published May 23, 1918, and I quote below, at considerable length, section applicable to your case:

### Here's the Definition

Section 121K.—Definition of non-productive occupation or employment.

"In the present emergency it is not possible to extend the protection of deferred classification to those registrants engaged in certain occupations or employments which are non-productive.

"There is a great demand for labor in all productive occupations and employments, and especially in agriculture and other necessary industries. Therefore registrants who have been given deferred classification and who can engage in some productive occupation or employment without substantial financial loss or hardship to themselves or others should be willing to seek some productive occupation or employment or enter the military service rather than remain in an occupation or employment in which they are rendering no effective assistance to the nation.

"If a registrant is idle he, of course, is not occupied or employed at all, and his status of idleness furnishes ground for the withdrawal of his deferred classification or late order number; and the regulations applicable to idle registrants shall be deemed applicable also to gamblers of all description and employees of race tracks and bucket shops,

and to fortune tellers, clairvoyants, palmists and the like who, for the purposes of these regulations, shall be considered as idlers.

"The employment or engagement of any able-bodied registrant of military age in any of the following occupations or employments is not sufficiently effective, in the present emergency, to justify the postponement of his call into military service, notwithstanding he may have a late order number and notwithstanding he may have been placed in class 2, 3, or 4 on the ground of dependency; and all registrants engaged as follows are to be considered by local and district boards as engaged in non-productive occupations or employments:

"a—Persons engaged in the serving of food and drink, or either, in public places, including hotels and social clubs;

"b—Passenger-elevator operators and attendants, and doormen, footmen, carriage openers and other attendants in clubs, hotels, stores, apartment houses, office buildings and bath houses;

"c—Persons, including ushers and other attendants, engaged and occupied in and in connection with games, sports and amusements, excepting actual performers in legitimate concerts, operas or theatrical performances;

"d—Persons employed in domestic service;

"e—Sales clerks and other clerks employed in stores and other mercantile establishments."

### Exceeding Their Authority

If you will read this carefully, you will see that any local or district board that seeks to declare an automobile mechanic or city salesman or traveling salesman as in non-productive work is exceeding its authority.

You will also notice that the word "non-essential" does not appear but, rather, the word "non-productive" is used. I might say now that the word "non-essential" has never been applied in any way to the automobile business by any department in Washington, and it is not considered so. I know that any attempt, by any local board, whether it be a clerk or labor board, which is classing any work as non-essential, such as the automobile business, is acting directly opposite to the wishes of Provost Marshal General Crowder's office.

In reading the quotation from the selective service regulations, I want you to particularly consider A, B, C, D and E classes and see whether you find therein anything that applies to automobile mechanics, salesmen, etc. It absolutely does not include your business in this list of non-productive labor. You understand, of course, that the man in your employ who is in Class 1 of the draft is liable to be called any time, not to go into some other kind of work, but to go into the army. Likewise, you will

understand that a man in class 2 must answer the call of the selective draft when all the men in class 1 have been taken, but this has no reference whatever to the transferring of men in your employ into what is commonly called war work or essential industry.

The position taken on this question is, that the work which your men are doing in keeping the automobiles of this country running is productive labor, for it enables the men running these cars to produce and to help carry on the war.

I asked this question while in the Provost Marshal General's office: "*What should an automobile dealer do if one of his men who is in deferred classification is called before a draft or labor board and told he must change his occupation?*"

The answer was: "*Tell your dealer to hire a lawyer, for the draft or labor board is exceeding its authority.*"

### Report All Cases Promptly

I must say in this connection that this association has an attorney employed for this purpose, and would ask that you report any such cases to this office, so the matter may be taken up with the draft or labor board in the proper way.

We must remember that there are men appointed on draft and labor boards who are prejudiced against some one industry or another, but at the same time you must remember that these boards are merely servants acting under a law and the law which these boards are to follow is printed, and plain. The district board for the District of Columbia ruled that all automobile mechanics engaged in the repairing of passenger cars would be declared as in non-productive labor. This caused a terrible storm in Washington.

The merchants sent large delegations to the draft board and private individuals complained, and it was shown that over 300,000 persons in Washington rode down to their work daily in motor cars. The street car facilities in Washington are absolutely inadequate now to carry the people who wish to ride on the cars and the draft board was asked how it would be possible to carry on the business in Washington without the motor car.

*It is also well to bear in mind that this board received a severe reprimand from the Provost Marshal General's office for this ruling, and nothing more has been heard of it, and the automobile mechanics in Washington have not nor will they be disturbed in their present employment.*

The issuance of this statement of the draft board in the District of Columbia went broadcast throughout the country and many of the other boards thought that, as this came from the District Board in Washington, it was an official statement, and tried to follow suit with a like order, but inasmuch as there is no authority for it in the law it has not been enforced any place that I know of.

The next bulletin of the N. A. D. A.

will carry a complete explanation of this matter, but I am giving it out to you as first-hand information for some of you are worrying about this phase of your business. I had intended to hold this information for the annual meeting, which is slated for Monday night, Oct. 14, but inasmuch as the Health Board has put the ban on large gatherings owing to the influenza epidemic it may be necessary for us to postpone this meeting; hence, this letter at this time.

If there is any phase of this situation which I have not made clear, I hope you will call me, and I will endeavor to straighten out any tangles for you.—Kansas City Motor Car Dealers' Association, E. E. Peake, Secretary.

### Vesper Reassures Garagemen

Editor Motor World: The question of essential and non-essential has probably been passed around more widely in the automobile industry than perhaps any other industry in the country, and the fact of the matter is, so far as we have been able to learn, there has never been any official ruling placing the automobile business, or any of its kindred lines, such as garages, etc., in the non-essential list. The only ruling that we are aware of is the one that has placed the automobile in the non-war industry list.

The fact of the matter is that the War Industries Board were very positive in telling the delegation of automobile dealers who attended the hearing before them that they considered it more necessary to keep the automobiles already sold in use and in service than it was to build new ones.

The War Industries Board is, I am satisfied, convinced that the automobile is a necessity, and as such is entitled to consideration in its maintenance. Therefore, I believe that the garage business will be less liable to feel the effect of curtailment than other branches of the industry. It all might be summed up in interpreting the attitude of official Washington as of the opinion that there are enough automobiles already in use for our present requirements, but that it will be necessary to provide parts to maintain them up to the proper point of efficiency, and that this is more important than the manufacture of new cars.—National Automobile Dealers' Association, F. W. A. Vesper, President, St. Louis.

### Globe Truck Sold; To Continue

ST. LOUIS, Oct. 14—John T. Soy, a stockholder of the Globe Motor Truck Co. of Missouri, has bought the real estate, shops and good will of that company at an auction sale on the premises in East St. Louis. He announces that he will continue the manufacture of Globe trucks. The sale included the site, well located for shipping, 226 x 563, main factory 54 x 175, side factory 28 x 84, storeroom 33 x 58, office 33 x 55, and all machines and tools. The price was not made public.

## Work or Fight Order Hits Floor Salesmen

### Peake, of N. A. D. A., Following Investigation, Says Other Employees Are Exempt

ST. LOUIS, Oct. 14—No automobile employee, with the exception of floor salesmen, are subject to removal from their jobs under the "Work or Fight" order, according to a report filed with President Vesper, of the N. A. D. A., by Executive Secretary E. E. Peake. This report was made after Peake and two directors had visited Washington with a view to clearing up the muddled situation as to automobile employees. His report is based upon information obtained from the Provost Marshal's office, whence comes the Work or Fight order.

The report calls attention to the ruling made by a Washington city draft board that automobile employees were in the non-essential class. He says this report was widely published, but what happened later was not published. This was, in effect, that a representative of the Provost Marshal's office visited this draft board and forced a change of the ruling.

He says that the Washington automobile dealers showed to the board that 300,000 persons in that city went to and from work in motor cars, and if these were not kept running the street cars would be unable to handle the transportation so created. The higher up authorities, it appears, never planned such a ruling against the motor trade.

Peake says that the Provost Marshal's office advised that if a mechanic or traveling salesman is ordered to change jobs, that the employer send an attorney to appear before the board. He also advises that local associations name attorneys who can get posted on the situation. The marshal's office said that any board ordering automobile men to get other jobs "had exceeded its authority."

The report quotes at considerable length the Work or Fight rule from the Provost Marshal's office, and calls attention to the fact that it does not speak of "non-essential" employment but of "non-productive employment."

### California Conserving Fuel

LOS ANGELES, Oct. 5—While there has been no declaration of gasolineless Sundays for California other steps toward the conservation of fuel have been taken. Filling stations now restrict the hours in which they will sell gasoline to 6 a. m. to 6 p. m. daily and are closed tight on Sunday. In the announcement of the change of policy it was stated the movement was made to conserve man power.

At Camp Kearney and other military cantonments in this part of the country a strict check is now being made on the use of gasoline. All cars, motorcycles and trucks now must be returned to the garages by 6 o'clock in the evening. This has eliminated a lot of use-

less running around with government machines and officers who formerly used cars whenever they pleased now must patronize public stages.

### Curtail Road Making Machinery

WASHINGTON, Oct. 10—Road making machinery and parts cannot be manufactured in any quantities for the 6 months beginning Oct. 1, 1918, except:

1—Repair parts.

2—For work on railroads and other public utilities.

3—For roads repaired by the United States Government, the several states, counties and municipalities.

4—For new construction by the United States Government either directly or indirectly.

This curtailment is by the order of the War Industries Board. Briefly, it means that no road making machinery will be manufactured for the construction of new highways except where such construction is either directly or indirectly for the Government. Parts for the repair of road making machinery can be secured, however, where the machinery is to be used in the repair of roads and highways either for the Government or for state, county or municipal order.

### Ford's Pulley Out in November

DEARBORN, Oct. 10—Henry Ford & Son are getting ready to start production on the new pulley attachment for the Fordson tractor, and deliveries will begin the second week in November. The pulley is going to be marketed without the governor attachment. The demand for the pulley being so great, the company has been induced to get the pulley on the market as early as possible, and after exhaustive experiments has found that the pulley will work just as well without the governor.

The total production of tractors to date is 24,000; last week's production was 1028, and the average daily production is 170.

E. G. Liebold, secretary to Henry Ford; A. B. Jewett, Ford Motor Co. photographer, and Gaston Plamtfiff, manager of the Ford Motor Co. at Long Island City, have gone to Mexico to investigate the situation in that country with a view of establishing a tractor plant. Due to urgent business at the plant C. E. Sorensen, general manager of Henry Ford & Son, was unable to make the trip.

While visiting the tractor plant Prince Axel of Denmark was presented with a Fordson tractor by Henry Ford. This will be painted in Danish colors and sent to the Prince's native country with plows, discs and other necessary agricultural implements. This may be the first gun toward starting tractor activities in Denmark.

### Milburn Cars Change Series Nov. 1

TOLEDO, Oct. 7—After Nov. 1 no more Milburn electrics of the present series will be made. The price of these cars will increase Nov. 1 from \$1,985 to \$2,185.

## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

H. H. Stuart, manager of the Detroit Automobile Dealers' Association, which suspended its activities as a patriotic measure, has become associated with the executive staff of the Denby Motor Truck Co., Detroit.

Frederick J. Slekert, Jr., formerly president and manager of the F. J. Slekert Co., Milwaukee, dealer in motor trucks, has received a commission as first lieutenant in the Motor Transport Corps at Camp Holabird, Md.

L. F. Schoellkopf, head of the L. F. Schoellkopf Co., Ford dealer, Madison, Wis., has been re-elected president of the Madison Association of Commerce.

J. E. Baum of the factory service department, Nash Motors Co., Kenosha, has accepted the position of service manager of the Philadelphia Nash Motors Co. and assumed his new duties in Philadelphia on Oct. 10.

A. W. Dietzel, for several years superintendent of the Waukesha Motor Co., Waukesha, Wis., has resigned to accept the position of works manager of the I. B. Rowell Co., Waukesha, manufacturer of Ford starters, tractor parts and farm implements.

Dwight Davis, who was assistant general manager of the Hyatt Roller Bearing Co., has taken a similar position with the Evertight Piston Ring Co., St. Louis.

Roy E. Frye, chief owner of the Roy E. Frye Motor Co., St. Louis, has transferred the agency for the Saxon car to the Mitchell Automobile Corp., preparatory to entering the military service.

E. H. Geyer has been appointed general sales manager of the Hercules Motor and Mfg. Co., Canton, Ohio.

R. J. Miller has been sent to New England to take charge of the work of aiding the dealers selling Cleveland tractors in that territory. He was formerly with the Studebaker, and succeeds H. S. Ketcham. Miller is making his headquarters with A. H. Sowers, the Eastern Massachusetts agent at Boston.

J. P. Guyer has been appointed manager of the Bethlehem, Pa., branch of the Packard Motor Car Co. of Philadelphia. He succeeds J. E. Huggins, resigned.

Miss Nellie D. Prendergast, who for the past year has been advertising manager of the H. Barcroft White Corp., Syracuse, Nash distributor, has been appointed manager of motor truck sales and advertising departments of the Kaufman-Morris Co., distributors of Nash cars and trucks in New York.

### Ratify Chevrolet-General Motors Merger

NEW YORK, Oct. 14—The merger of the General Motors Corp. and the Chevrolet Motor Co. has been finally ratified, the stockholders voting at a meeting last Friday to adopt the basis of exchange originally laid down. Under this arrangement holders of Chevrolet stock will receive one and one-seventh shares of General Motors common and 44 cents in cash for each share of Chevrolet. The General Motors Corp. has declared a dividend of \$3 per share, payable Nov. 1, on common stock of record Oct. 18. Hence stockholders who prior to that

date forward their certificates to the Guaranty Trust Co., New York, properly endorsed, will receive this dividend. Stock delivered after this date will not carry the dividend but holders will receive an equivalent amount from the Guaranty Trust Co. Following is the balance sheet of the Chevrolet Motor Co. as of Oct. 11, 1918:

Assets	
Cash .....	\$278,042
732,680 shares G. M. Common.....	73,268,000
Total .....	\$73,546,042
Liabilities	
Capital stock outstanding, 641,095 shares .....	\$64,109,500
Surplus and undivided profits.....	9,436,542
Total .....	\$73,546,042

### Mosler Revises Selling Territory

NEW YORK, Oct. 14—A. R. Mosler & Co. has made a number of changes in its selling force and is now represented by these men in the following territories: New England, L. F. Wright; New York and Western Pennsylvania, L. G. Falck; Eastern Pennsylvania, Maryland, Delaware and Virginia, J. E. Patton; South Atlantic Coast States, I. W. Becker; Ohio and Michigan, H. H. Meyer; Indiana, Kentucky and Southern Illinois, F. S. Murray; Southwest, John Staff; Nebraska, Kansas and Missouri, C. D. Parr; Illinois and Northwest, E. Gluckauf; Inter Mountain, M. L. Monger; New York City and New Jersey, I. H. Sollish.

### Fenner to Assist Hanch

WASHINGTON, Oct. 10—David C. Fenner, member of the Highways Transport Committee of the New York State Council of Defense has been appointed as assistant to C. C. Hanch, Chief of the Automotive Products Section of the War Industries Board.

### Old Coast Dealer Passes Away

LOS ANGELES, Oct. 4—Calvin W. Brown, probably the oldest active motor car dealer in the country, was stricken at his desk and died yesterday. Mr. Brown was 77 years old and president of the Walter M. Brown Co., Stutz distributor, a company he organized and financed in the name of his son. He had been more prominent in commercial and financial centers than in the motor car business, as he left the actual direction to his son, Walter, but he was at the establishment daily from opening to closing hours.

### Shuford Starts "Supply Exchange"

ST. LOUIS, Oct. 14—John F. Shuford has resigned as manager of the wholesale department of the Bittel-Leftwich Co. and has created a place for himself as "supply exchange." His idea is this: He corresponds with jobbers and finds out if they are over-bought on any item. Then he buys this and sells it to other jobbers. He says that business is starting nicely. He also is distributor for the eastern half of Missouri for the Disco starter for Fords, and is jobbing a tire repair material that is made after a private formula.

## Oregon Dealer Buys Nine Loads of Tractors

### Made First Purchase September 1 and Did Big Business After Demonstration at Portland

PORTLAND, ORE., Oct. 12—The Northwest Auto Co., which made a contract Sept. 1 with the La Crosse Tractor Co., has ordered nine carloads for distribution in this state and western Washington.

It bought a carload and had C. E. Quest from the factory here at the recent demonstration. The tractor was put through severe tests and made a good showing. Twenty tractors were sold on the grounds.

### More Conservation in Boston

BOSTON, Oct. 12—The Kissel Motor Co. of New England has closed its building on Commonwealth Avenue and moved to 64 Brookline Avenue, occupying the same structure with the New England Velie Co. W. A. Aldrich, who took over the Kissel some months ago, is a partner in the New England Velie Co., and by combining the two agencies in one building it will save \$15,000 a year in rent alone. The Noyes-Buick Co., that took over the G. M. C. truck line a few months ago, has merged its wholesale and retail in one building on Lawton Street, and the retail salesrooms on Commonwealth Avenue have been leased to the Hall Truck Co.

### Helping Uncle Sam

BOSTON, Oct. 12—R. D. Green, manager of the H. S. Waite Co. branch at 715 Beacon Street, has turned over his salesrooms and entire office force temporarily to Captain J. Franklin Brown, in charge of the recruiting for men for the Motor Transport Division that the Government is trying to raise quickly. Captain Brown has enrolled several hundred expert motor mechanics in the past week since he opened his headquarters here.

### Lalley Holds Dealer Conventions

DETROIT, Oct. 12—The 3-day dealer conventions being held by the Lalley Electro-Lighting Co., Detroit, among its distributing agencies are proving successful. Each convention is staged under the direction of three factory representatives who are traveling the country for this purpose. The three men represent respectively: advertising, sales and the mechanical or technical end. All the dealers of a certain territory are called by the distributor to meet with him in convention for 3 days, when each of the representatives has an opportunity to show the dealers how the farm light outfit functions from a technical standpoint, what the methods of marketing the product are, and also familiarize the selling agents with the purposes of each piece of advertising.

## Senate Committee Cuts Car Sales Tax

**Which Doesn't Necessarily Mean  
It Will Go Through as Revised—  
Would Make It 5% Instead of 10%**

WASHINGTON, Oct. 10—The tax on automobiles was lowered from 10 per cent of the selling price to 5 per cent of the selling price by the Senate Finance Committee yesterday. The tax on tires, inner tubes, parts and accessories fixed by the House of Representatives at 10 per cent was also reduced to 5 per cent. These reductions place passenger cars on the same tax basis as trucks, trailers and tractors.

The reduction of the 10 per cent on parts to 5 per cent is counted as very important. As the bill stands with this 5 per cent tax it is the intention of the Treasury Department, if the bill is passed, to tax dealers 5 per cent on all parts they have in stock, a proceeding which would be very costly and unjust to the dealers. Alfred Reeves and Hugh Chalmers, representing the National Automobile Chamber of Commerce, have already suggested to the Senate Finance Committee that the tax should only be placed on those parts which have been shipped to dealers since Sept. 1, 1918, when the bill was presented to the House.

Details showing how this plan of taxing the parts shipped after Sept. 1 only when they are sold by the dealers are now being worked out by Reeves and Chalmers in co-operation with the National Automobile Dealers' Association. This plan would be considered most equitable. Reeves has telegraphed F. W. Vesper, president of the N. A. D. A., regarding this scheme, and expects to meet members of the dealers' association here in the next few days.

An objection raised by the senators to placing the tax on parts shipped after Sept. 1 was that so long as department stores would have to pay a tax on everything regardless of how long they have had it in stock, dealers should do the same. Reeves and Chalmers pointed out that this would be unjust because the department stores can reduce stocks at any time by means of sales while the dealers must carry the parts until the demand arises for them.

### N. A. D. A. Activities

ST. LOUIS, Oct. 14—President Vesper, of the N. A. D. A., has accepted an invitation to speak before the Rocky Mountain Automobile Association at the annual meeting, which will be held in Pueblo Nov. 11 and 12.

Executive Secretary Peake will be in St. Louis this week to plan a membership campaign in the Southwest and extreme West. An advance worker already has entered this territory.

Harry Haynes, of the membership staff, is working in Ohio after crossing Indiana.

The applications this week run about 100, and were from various sections of the country and did not represent any special work but merely the growth of the association idea.

### To Dissolve Motor Mart

DETROIT, Oct. 12—A petition for voluntary dissolution has been filed by the stockholders of the Motor Mart, of which Lee Cuson was controlling member. Seward F. Nichols has been appointed receiver. The petition lists the assets at \$24,000, but they actually are estimated at \$20,000. The liabilities total \$12,000. The case will be heard before Circuit Court Commissioner Henry S. Nicol, Oct. 30. The organization was capitalized at \$10,000, and dealt only in used cars.

### Missouri Has 184,862 Cars

ST. LOUIS, Oct. 14—The Oct. 1 announcement of licenses issued shows that Missouri has 184,862 cars. Other figures are: 1648 dealers' plates, 2340 dealers' duplicate plates, 3692 motorcycle plates, 21,087 chauffeur badges, 8500 re-registrations and 1485 duplicate plates.

## N. A. D. A. to Wind Up Membership Campaign

**Plans Coast Tour Now with Conclusion of Successful Enterprise  
Middle of November**

KANSAS CITY, Oct. 14—Ward C. Gifford, assistant to Executive Secretary E. E. Peake, has left for the Pacific Coast to confer with Director P. H. Greer in Los Angeles as to details of a 30-day N. A. D. A. membership campaign on the coast. There are strong organizations in various coast states now, and within 30 days every dealer in that section will be invited to affiliate with the National Automobile Dealers' Association.

The campaign has increased the membership to very close to the 5000 that was set as the mark when Peake was made executive secretary, and it is now proposed to end the membership drive about the middle of November with a series of meetings in important cities, which will be attended by both President Vesper and Peake.

Most sections have been covered except the South and Pacific Coast, and many cities there have asked the N. A. D. A. leaders to hold meetings to aid the local dealers in stimulating the membership work.

When the campaign was begun last summer the N. A. D. A. had only about 800 members. To-day the 5000 mark is nearly reached and the treasury has acquired such strength as will enable the organization to put through some of the plans it has had in mind but which were impossible without numerical strength and funds.

## Senate Reduces Tax on Automobile Users

**Makes Rate of Tax Run from \$5 to  
\$25, Which Is 50% of What Was  
Originally Written Into Bill**

WASHINGTON, Oct. 12—The Senate Finance Committee yesterday reduced the tax on users of automobiles 50 per cent, lowered the tax on sight-seeing automobiles and taxicabs, and gave consideration to the possibility of the serious effect on gasoline production of the proposed gasoline tax. New automobile taxes to be put on the users of cars as agreed to by the committee are as follows:

23 hp. or less.....	\$5
Between 23 and 30 hp.....	10
Between 30 and 40 hp.....	15
Over 40 hp.....	25

Electric automobiles will pay \$2 per horsepower instead of \$5, as was fixed by the House, and 25 cents for each 100 lb. of weight instead of 50 cents.

The tax on sight-seeing automobiles was changed from 10 per cent of the gross receipts to a flat tax of \$20 per year per vehicle.

The tax on taxicabs and other automobiles operated for hire, carrying not more than 7 passengers, was changed from 5 per cent of the gross receipts to a flat tax of \$10 per car per year.

The committee also listened to Mark L. Requa, director of the Oil Division of the Fuel Administration, who told of the shortage of gasoline and the needs for it for war purposes, and urged that special consideration should be given to the oil producers in the revenue legislation. At present the revenue bill as passed by the House provides for a tax of 2 cents per gallon of gasoline.

### Lens Ordinance for Des Moines

DES MOINES, Oct. 12—The new automobile headlight ordinance, which was recently passed by the City Council through the efforts of the Motor Trades Bureau Board, will become effective within the next week. The Motor Vehicle Light Commission has already made tests of and approved the following devices: The "I. L. C." lens, MacBeth lens, Warner lens, Sun-Ray lens, Corning clear conaphore, Corning novial conaphore and the Stewart lens. One device has been rejected by the commission, and two of those approved are placed under slight restriction.

### "Flu" Calls Off St. Louis Meetings

ST. LOUIS, Oct. 14—An influenza edict issued last Monday forbids meetings of all kinds. As a result, announcements of meeting of the Commercial Car Association and Motor Trade Accessory Association for last week were canceled. Until meetings are permitted all work will be done by committee.



# Trucks

Digitized by Google



Passenger  
Cars

## MOTOR WORLD GUIDE

Passenger  
Cars

Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2- Pass.	5- Pass.	7- Pass.
ALLEN Series 41	4-31x5	Conn	A-Lite	112	32x3 1/2	SS	\$11145	\$1195	....
AMERICAN B	6-31x5	A-Kent	West	122	32x4	SS	1645	1595	1695
ANDERSON 20	6-31x4 1/2	Conn	Webbs	120	32x4	SS	**1465	....	....
400-F	6-31x4 1/2	Boech	Webbs	120	32x4	SS	**1925	....	....
APPERSON E-18	8-31x5	Remy	Bijur	130	34x4	SS	12850	....	(2800)
Anniversary					32x4 1/2			....	(4000)
AUBURN 6-39-B	6-31x4 1/2	Remy	Remy	120	34x4	SS	1595	1595	....
6-44	6-31x5 1/2	Delco	Delco	131	35x4 1/2	SS	....	1785	1785
BIDDLE H	4-31x5 1/2	Eiseman	G & D	121	32x4	QD	2700	....	12750
BRISCOE B-24	4-31x5 1/2	Conn	A-Lite	104	30x3 1/2	C	885	885	....
BUICK E-34-36	4-31x4 1/2	Delco	Delco	106	31x4	C	795	795	....
E-44-45	6-31x4 1/2	Delco	Delco	118	34x4	SS	1265	1265	....
E-49	6-31x4 1/2	Delco	Delco	124	34x4 1/2	SS	....	....	1495
CADILLAC 67	8-31x5 1/2	Delco	Delco	{125	35x5	SS	3520	3520	3520
CASE U	6-31x5 1/2	Webbs	Webbs	125	35x4 1/2	SS	11875	1875	1875
CHALMERS 6-30	6-31x4 1/2	Remy	Webbs	{117	32x4	SS	1565	1565	....
				{122	34x4		....	....	1615
CHANDLER	6-31x5	Boech	Webbs	123	34x4	SS	11795	11875	1795
CHEVROLET 490	4-31x4 1/2	Remy	A-Lite	102	30x3 1/2	C	715	725	....
FA	4-31x4 1/2	Remy	A-Lite	108	32x4	SS	995	995	....
D	6-31x4	Remy	A-Lite	120	34x4	SS	11550	1555	....
COLE 870	8-31x4 1/2	Delco	Delco	127	33x5	SS	2595	2595	2595
COLUMBIA C-40	6-31x4 1/2	A-Kent	W. Lord	115	32x4	....	11595	1550	....
CROW-ELKHART CB-36	4-31x5	Conn	Dyneto	114	32x3 1/2	SS	1095	1155	1095
DANIELS D	8-31x5	Webbs	Webbs	127	34x4 1/2	QDR	3500	3500	3500
DAVIS H-1	6-31x4 1/2	Delco	Delco	119	34x4	....	1885	1885	....
DIETZ FLYER	6-31x5 1/2	Delco	Delco	125	34x4 1/2	....	....	2050	2050
LESLIE	6-31x5 1/2	Conn	Dyneto	112	32x3 1/2	SS	1095	1095	....
DODGE BROTHERS 4-31x4 1/2	Own	N.E.	N.E.	114	32x3 1/2	SS	985	985	....
DORRIS 6-36	6-4	Boech	Webbs	132	33x5	SS	....	....	3500
DORT 11	4-31x5	Conn	Webbs	105	30x3 1/2	QD	985	985	....
ELCAR D.F.	4-31x5	A-Kent	Dyneto	116	33x4	SS	....	1175	1175
ELGIN H	6-31x4 1/2	Remy	Wagner	118	33x4	SS	11295	1395	....
EMPIRE 50-51	4-31x5	Conn	A-Lite	115	33x4	SS	1165	1125	....
72	6-31x4 1/2	Conn	A-Lite	120	34x4	SS	....	1445	1475
73	.....	.....	.....	....	....	....	....	11360	....
ESSSEX A	4-31x5	Webbs	Delco	108 1/2	32x4	....	....	1395	....
FORD T	4-31x4	Own	....	100	30x3 1/2	C	500	525	....
FRANKLIN 9	6-31x4	A-Kent	Dyneto	115	33x4 1/2	SS	2850	2900	2900

ABBREVIATIONS — "A. Kent" Atwater Kent, "A-Lite" Auto-Lite, "Conn" Connecticut, "G & D" Gray & Davis, "Eiseman" Eisemann, "L.N." Leeco-Neville, "N. E." North East, "Webbs" Westinghouse, "W. Lord" Ward Leonard, "SS" Straight side, "QDR" Quick Detachable, "C" Clincher, "QDR" Quick Detachable Reversible. NOTE—30x3 1/2 means that the rear tire is 30x3 1/2 and the front are smaller.

## Dealers Dazed by Truck Sales Rule

**Find, After Year of Selling, They  
Must Pay Taxes They Never Fig-  
ured on Paying—Hope for Relief**

NEWARK, N. J., Oct. 14—Through the checking up of an inspector from the Internal Revenue Office at Washington a situation has been developed here that may be the same in all parts of the country.

The Federal inspector referred to has called upon local dealers in trucks, asking them to show him their books covering the sales of such trucks as have been made since Oct. 4, 1917, where the dealers have furnished any additional equipment to the purchaser at the time of the sale other than the equipment which is furnished by the factory.

The inspector has taken a list of such sales where bodies had been furnished, cabs, windshields, etc., and, after deducting from the price of the truck the tax which the dealer had paid the factory on the wholesale price and freight charge, he made a charge against the dealer of 3 per cent of the remaining amount.

As an example: If the dealer purchased a truck from the factory that cost him \$1,000 he paid the factory the 3 per cent tax of \$30, and the railroad company's \$70 freight charge, making the truck cost the dealer delivered in Newark \$1,100. If this truck was sold to Jones at the list price of \$1,500, plus the \$30 factory tax, plus the \$70 freight, and furnished him with a body that cost, say, \$400, the revenue inspector figures that the dealer should pay the Government a tax of 3 per cent on \$1,930, or \$59.90, less the \$30 which the dealer originally paid to the factory on the chassis, giving an additional tax of \$27.90.

This means that if a dealer sells a man a chassis for \$1,500, plus the factory tax of \$30 and the freight of \$70, or \$1,600 delivered, and place on this chassis a windshield which costs \$5, the dealer must pay the Government a tax amounting to 3 per cent of \$1,505, or \$45.45, less the \$30 tax paid the factory, whereas, had the man purchased a chassis without the \$5 windshield attached, the Government would have realized but \$30 from the sale and the purchaser could buy his windshield elsewhere and save the \$15.05 tax brought about by the application of the windshield to the truck.

None of the Newark dealers ever received a copy of this law, and as a consequence no reports have ever been submitted by them to the local revenue office. Now they are called upon in some instances to make a payment of thousands of dollars back taxes, and in addition are subjected to a penalty of 50 per cent of the amount of the tax.

The dealers' counsel has taken the matter up with the revenue office here, asking for an interpretation of the law and setting forth the injustice of it.

They have been advised that the tax would be collectible from the customers to whom the taxed trucks have been sold, but this could not be done without considerable trouble, to say nothing of causing hard feelings between the dealers and their customers.

The dealers have been advised to procure tax blanks and submit reports at once, paying up back taxes, and also the penalty of 50 per cent, but to submit with the latter a protest and a request that it be waived under the circumstances.

It has also been suggested that the dealers take the matter up with Daniel C. Roper, Commissioner of Internal Revenue at Washington, explaining the matter, and requesting him to cancel the 50 per cent penalty.

## N. A. D. A. Urges Parts Conservation Program

**Advises Dealers Not to Replace  
Parts That Can Be Repaired—  
To Save Labor, Too**

ST. LOUIS, Oct. 14—"Owing to the growing scarcity of automobile parts," said President Vesper, of the N. A. D. A., "the association is advising all inquirers that no new part should be placed in a car when the old part will do the work. I believe that such action is necessary to protect the cars now running."

"A case in point came up in our own shop here. A doctor had an accident and an axle was bent. He came in and ordered a new axle. There was no question of payment. He was willing to pay and had the money. We refused to put it in and explained that new axles were becoming scarce and the next case the axle might be entirely unserviceable and we would have to replace it. His could be straightened and he must use it."

"The doctor did not like the idea of driving a car with a straightened axle, but after he was shown the exact status of things he consented."

"We also are refusing to replace bent fenders. As long as the old fender will do the work it must be retained. Likewise we are advising that car owners who have been in the habit of dropping in to get a bolt tightened or a spark plug cleaned be informed that they must do this work themselves."

## Cut Gasless Sundays— Adopt Rationing Plan

**October 13 Probably the Last—  
Voluntary Pledge System to  
Conserve Gasoline**

WASHINGTON, Oct. 12—Gasolineless Sundays will be abolished following Sunday, Oct. 13, and a new gasoline conservation plan will be adopted. The public will be asked to conserve from 10 to 20 per cent of its customary requirements voluntarily. The new plan has not yet been definitely decided upon, but it is probable that it will include a voluntary rationing of the weekly gasoline consumption on the part of motorists. Pledges may be requested. An educational campaign will accompany this pledge system.

Although there has been a saving of 150,000 barrels each week through the gasolineless Sundays, there is no appreciable surplus of gasoline on the Atlantic seaboard, according to the Fuel Administration, and although more than 650,000 bbl. of gasoline have been sent to France for war uses through the voluntary conservation, a safe margin of reserve has not yet been established either abroad or here.

At one time during the recent offensive it is said that there was but 9 days' supply of gasoline in France. The Liberty 12 airplane engine consumption of 85 gal. of gasoline an hour, making a squadron consumption of 1575 gal. of gasoline for each average flight, combined with the heavy demand for trucks, tanks and other motor vehicles created the original shortage. The War Department insisted on maintaining more than 610,000 bbl. of gasoline on the seaboard for shipping, and as seaboard stocks up to the time of the gasolineless Sundays at no time amounted to more than 650,000 bbl. during the present season, the margin for domestic use was small and critical. As a result the gasolineless Sunday plan was inaugurated, but the inequitableness of this is realized by the Fuel Administration and the rationing plan is now being considered so as to allow the worker who cannot use his car except on Sunday the opportunity to do so and conserve on the days he cannot use it.

## Coming Events

### Expositions

Atlanta, Ga.....	Eastern State Fair and Automotive Exhibition.....	Oct. 12-19
Dallas, Tex.....	Seventh Annual Texas Automobile Show.....	Oct. 14-27
	Texas State Fair.....	
Macon, Ga.....	State Fair.....	Oct. 30-Nov. 9
Shreveport, La.....	State Fair.....	Oct. 28-Nov. 4
Phoenix, Ariz.....	State Fair.....	Nov. 11-16

### Tractor Demonstration

Hempstead, L. I.....	Nassau County Farm Bureau.....	Oct. 19
	H. J. Evans, County Agricultural Agent.	

## Ways You Can Handle Used Cars

(Continued from page 16)

### How to Sell Used Cars

1—*Circularize*—Compile lists from several sources. Get names of low-priced car owners from license lists and circularize them for cars of a better grade. When you have a certain car to sell select names from the license list and also get names from the numbers of cars seen at curbs, which cars should indicate something as to the buying prospects of the owner. Operate in much the same manner as when selling new cars, except that the prospect list is different.

2—*Advertise*—Use display and classified space. Advertise particular models and give some prices where there are bargains.

3—*Canvass Personally*—This is done by following up prospects much the same as in new car selling.

The sales arguments are different from those in new car selling, and may be illustrated by the following:

### Sales Letter

*Do you know how to get the most value for your money in buying a motor car?*

*We'll tell you: It is by buying a good used car.*

*A used car has been thoroughly*

*tested by service. It runs well. It is broken in. It is comfortable, not stiff, is easy riding.*

*And, compared to the miles of service in the cars, a new car cannot compare with a good used car so far as price is concerned.*

*We have some fine used cars that look almost as good as new cars.*

*The prices and sizes are made to fit any price and any service.*

*If you have need of a car let us tell you what we have.*

Phone 7777.

### Business Practice

1—Don't spend more in fixing up a car than you can get out of it.

2—Try to sell in 30 days after the car is ready for resale.

3—Seldom hold a car longer than 90 days.

4—Be sure of your buying price.

5—Remember this: The experience you get in *buying* used cars will be of wonderful value to you when normal times return, for you never will make the mistakes of past years of paying more in a trade than a used car is worth. So make a business of it, make money at it, and get an education at the same time.

## Make Service Pay

(Continued from page 18)

is required for a job issue it in 1-pound packages and charge for it instead of having it in a loose bale where everybody takes what he needs—and then some. The waste in waste is a preventable loss. And if the waste costs 7 cents a pound charge it against the customer at 12 cents. Make a profit.

9—Make the parts department pay for defective parts labor, and see that the shop gets credit.

10—Keep accurate figures so that some day you can go to the manufacturer with some real evidence as to why 15 to 30 per cent is not enough on parts. If you want 33 1/3 you must have some real proof that you need it or you have no license to get it.

11—Go on a strictly CASH BASIS.

### Go After More Business

1—The cars running in your territory, other makes and especially your make, are one of your assets. From them you should seek an income.

2—Try to sell your service through:

a—Letters.

b—Personal calls.

c—Posters.

d—Newspaper advertising.

3—Send to your owners' list a letter like this:

### Service Sales Letter

Making a car last longer is one of the problems of to-day.

New cars are getting fewer each month because the factories are helping Uncle Sam make shells and fighting machinery to trim the Kaiser.

But the factories are permitted to make parts in order that the 5,000,000 cars in America may be kept in service.

Instead of buying a new car—which you probably couldn't get anyway—it is conservation to make the old car last—and this means a little attention to it.

A little care and inspection may mean a big money saving, for a car is only a piece of machinery, which, like a suit of clothes, lasts longer if little wears are corrected before they become big.

If you will bring your car to us we will inspect it at our usual charge of \$000 and tell you what condition it is in. (Insert here the price you have fixed for this job.)

A doctor's advice beforehand is a lot better than his advice afterwards.

Phone 8888 and make an inspection appointment. Or, leave the car and we can return it to you inside of 48 hours.

Also, use the same arguments in your advertising and personal calls. This sales effort is what will determine your success or failure. Your shop may be ever so efficient, but it becomes a loss when you fail to keep it filled with work.

4—Install an accessory department, erect a display case beside the service door or near the office where it can't help but be seen, keep the display in good order, and add to your income.

## How Bristol Put Loan Over

Editor Motor World: The excellent reports in Motor World of the efforts being made by the automotive dealers of the big cities in boosting the Fighting Fourth Liberty Loan campaign have been inspiring and have been watched with great interest by the smaller dealers who, located in smaller places, look to the reports of big doings in the metropolis, as such reports are given by the ever alert Motor World. That such reports have encouraged automotive dealers in such smaller towns to awakened interest must be made manifest by reports that are gleaned here and there.

In Bristol, Conn., a city of 20,000 population, and located eighteen miles from Hartford, the state capital, the automobile industry has been honored by the appointment as chairman of publicity for the entire campaign of one of the members of the largest garage and automotive sales agencies in that place.

This chairman has been able to so enthruse the advertisers of his city that the one local daily has simply been placarded from one sheet to another with announcements running from full page advertisements down to mere line announcements. All sorts of stories have been run in this paper together with the paid space announcements. The publicity chairman has secured from practically every manufacturer of the city and district from one-half to two full pages for advertising purposes, and from the merchants and even the professional men of the city, and in addition from a few wealthy individuals, he has secured additional paid advertising space.

This has meant that for four weeks the "Fighting Fourth" Liberty Loan has been brought in an educational manner before the people of Bristol, Forestville and Terryville, Conn., that being the district for the city of Bristol, whose quota was double that of last time.

Of great aid in this campaign has been the assistance rendered by the timely suggestions contained in Motor World. In the advertisements as prepared by the chairman of publicity are clippings from the various articles used in Motor World. As has been stated this chairman is a member of the firm operating the largest garage in his district and this garage has backed up the member of the firm by allowing him to use part of his time for such important work, and also by running advertisements in the local paper, the same as other mercantile houses.

Such an advertisement is enclosed (cartoon on page 7 in Motor World of Sept. 25) and from this illustration may be realized the manner in which this enterprising garage linked up its advertising campaign with Motor World. No better cartoons have been run during this campaign than those so kindly loaned by the Class Journal Co. Of course these have to be returned very promptly, so they cannot be used to the extent that might be desired. But newspaper publicity is wonderful and the one-time running in the newspaper is not to be

(Continued on page 100)



## Cut Out the Waste

(Look on pages 12, 13, 14 and 15)

### 75—CUT LIGHTS 75%

The Central Garage, Denver, has instructed its night foreman to cut down the lights about 75% as soon as business quiets down, which is usually about midnight.

### 76—"GOOD NIGHT, DELINQUENTS!"

A jobber with an annual expense of about \$5,000 of interest on delinquent accounts is saving this sum the coming year by declining to sell to delinquents.

### 77—BALES WASTE PAPER

The A. C. Hine Co., Cole and Oakland, Hartford, Conn., purchased a waste paper baler and now sells what was formerly thrown away. The machine has paid for itself several times over.

### 78—CONSERVING TIME

To conserve in every direction we are endeavoring to shorten the time necessary to teach men to drive trucks, as such work entails a long drawn-out process on the part of our instructors, who are themselves mechanics and could be doing better work keeping such trucks moving as are already in service.

We are also planning to get all possible amount of wear out of wearing parts which have a comparatively short life so that no replacements are made until absolutely necessary, thereby cutting down the customer's operating costs.

We find it difficult to make any saving in oil and gasoline because of the fact a certain amount of gasoline is necessary in order to develop a sufficient amount of power and oil is necessary for lubricating, but we discourage unnecessary mileage and driving trucks where you can get along without doing so and conserving gasoline by seeing no wastage of gasoline takes place in our service department and the same thing applies to our oil consumption.—George N. Hudson, manager general Vehicle and Walker trucks, Boston.

### 79—\$15 FOR DEMONSTRATING

The Universal Truck Co., Denver, saves demonstrating waste by requiring a deposit of \$15 for a day's hauling in the city or a mileage rate in the country, same to be refunded if prospect buys. This discourages fake calls for demonstrating.

### 80—SHOULD CITY SALESMEN GO?

Accessory jobbers in Kansas City are considering taking off city salesmen.

### 81—AVOIDS PARTS LOSS

The S-R Truck Co., Denver, saves time and avoids loss of parts by having part clerk deliver all parts only upon written requisition from foreman. Part clerk makes out complete record.

### 82—KEEP BUSINESS COMING

One service station has a card index of owners, with notations of dates when

cars were in the shop, the work done and price charged. These cards are used by the outside solicitor, who works on owners not using the station, and the cards are also used in connection with job tickets also on file.

### 83—KEEP ACCURATE RECORDS

A service station saves a lot of argument with patrons by preserving job tickets which show speedometer readings and other data collected on cars when brought in for repairs.

### 84—REDUCE THE OVERTIME

In a service station where the motto is "get it out of the way," the foreman aims to get all work done by 5 o'clock when the shop closes. There is little overtime in this shop.

### 85—LET FOREMAN PLAN WORK

In one service station the foreman gets the job ticket while the customer waits, and indicates when the job will be done. It's the foreman who plans the work—and there is no confusion at the last minute in the shop, trying to make good on a front office man's promise.

### 86—COULD YOU USE MORE HOSE?

A service station has installed additional air outlets, and longer hose, to save time lost in taking cars to air.

### 87—HAVE MEN WHO KNOW

A service station has already got its men established in its shop who will thaw frozen radiators this winter without bursting them. The first frozen radiator that comes in will be handled by a man that knows how.

### 88—SERVICE SALESMAN GETS INCOME

A service station has a high class salesman constantly on the street, visiting owners, soliciting business for the station. Business has increased 20 per cent in the two months he has worked.

### 89—FALSE CHARGES ARE A LOSS

A service station seems to be getting "velvet" when a mechanic works five minutes to clean up a job, and charges half an hour on the ticket. But the shop is losing, really, because the job can't be as well done by such spurts, and the practice reduces the efficiency of plant and men.

### 90—FINISH A JOB AT ONCE

A service station concentrates on each job until it is finished; eliminating unnecessary expense to owner and shop, in mechanics leaving one job to work on another and returning to the first job.

### 91—JOBS OUT SAME DAY

A service station aims to get each job out if possible on the day it is brought in—increasing turnover, reducing use of space, shortening time between outlay and income.

## 92—EVERY MAN MUST CUT WASTE

The Universal Auto Co., Franklin, Hupmobile, Diamond T and Bethlehem dealer in Hartford, Conn., has all business conducted by department heads. Economies are effected by keeping close watch of small as well as large things. Work is so laid out that it is evenly divided. Weekly meetings permit of general discussion. Every man in the employ of the concern measures up to his job if it is only sweeping the floor. Some one in authority sees that things are done, that nothing is wasted and that everything is utilized. Discounting bills is a big source of economy.

### 93—CUTTING THE OVERHEAD

We are cutting overhead by keeping only high grade service trucks to do errands and service work, thereby keeping down the monthly cost of shop cars.

We keep all tools in good condition, thoroughly sharpened, lubricated, and when not in use kept in their proper place in the tool room.

We hire a good man to handle the boilers, keeping a uniform heat throughout the winter without an expensive outlay for coal.

We avoid telegraph and telephone messages whenever possible and do not receive calls collect.

We always keep an understudy for every one in an important position and add to our organization men who fit harmoniously and economically into it.

We save oil by only using it on requisitions, and then only after the holder of the requisition has had it punched by the foreman, who ascertains if the oil desired is absolutely necessary; likewise gasoline.

Waste paper is salvaged and bailed from every department.

Second sheets are not used when copies can be made on the back of a letter sent us to which we are replying. This cuts down filing, takes less room, uses less paper, and is quicker to find in the file when wanted.—C. P. Cary, manager Garford Motor Truck Co., Boston.

### 94—CUT SERVICE COSTS

Brown, Thomson & Co., Cadillac distributors in northern Connecticut, have effected economies in the service department by closing down at 6 o'clock at night. Whereas a year ago free monthly inspection of cars was given for a year, now it is given for 6 months only. The service force has been reduced. Owners have been urged to know more about their cars and send them in for attention only when the difficulty is something they cannot remedy themselves. As a result there is less service to be given and customers are looking after their dollars, by making their own repairs.

### 95—"SPEEDY" BIN BOTTOMS

In the case of small parts, such as nuts and bolts, a V-shaped bottom to the bin accelerates finding the stock when it is low, as all the stock slides to the center of the bin. It also shows in one pile the amount of stock remaining.

**96—HIRE HALF A JANITOR**

If you haven't full need for a porter or janitor maybe you can share one with the man next door.

**97—ECONOMIZE ON SHELF SPACE**

Look over your stockroom and see if some of the shelf bins are not twice as deep as they need to be. Put in extra partitions and get a lot more room.

**98—HALF-SIZE LETTER PAPER**

A half-size letter sheet often does as well as a full size and makes the letter look shorter. Often the recipient is more likely to read it.

**99—LET CUSTOMER MAKE CLAIMS**

We have saved much time, labor and money recently by insisting that the customer follow the law and custom and make his own claims for lost and damaged express and freight shipments. Parcel post insurance compels us to make all parcel post claims ourselves, but we never make one on a freight or express shipment.—Fred Campbell, Fred Campbell Auto Supply Co., jobber, St. Louis.

**100—EXPLAINED F.O.B.**

A great help to us is the advertisement published by the National Association of Automobile Accessory Jobbers in *MOTOR WORLD* more than a year ago, headed: "What F.O.B. Means." We have had a quantity of these printed and use them daily to show customers that they should make their own claims for lost and damaged express and freight.—Fred Campbell, Fred Campbell Auto Supply Co., jobber, St. Louis.

**101—SAVES SCRAP PAPER**

One thing that we know is saving us money in a year's time is using our clean scrap paper over again. We find in our files that there is considerable paper which has been written on on one side. Rather than throw this away when the files are cleaned out, we have been using it for house forms and have been cutting it into convenient sizes and padding it for use in scratch pads.—L. Guy Long, Gibson Co., jobber, Indianapolis.

**102—MULTIGRAPH SAVES**

We have found the multigraph quite a saving and are using a good bit of the scrap paper from our files for printing up such forms as we use about the place.—L. Guy Long, Gibson Co., jobber, Indianapolis.

**103—SAVES CARBON PAPER**

We have effected a considerable saving in our carbon paper. All carbon paper which is supposed to be used up is sent to our stationery department, where it is cut down to smaller sizes or revived by heating the worn sheets over an electric iron. This melts the carbon on the paper and allows it to flow over the worn places.

**104—CHECKS USE OF STAMPS**

Sealing and stamping letters are done in the mailing department, where the mailometer or mailing machine keeps an account of the stamps used and avoids the loss and wastage of stamps when they are carried in many desks.—L. Guy Long, Gibson Co., Indianapolis.

**105—CUT DOWN SIZE OF FORMS**

We found that many of our printed forms could be cut down in size, and often to advantage, with a subsequent saving in the amount of paper used.—L. Guy Long, Gibson Co., Indianapolis.

**106—USE CHEAPER PAPER**

Along with the rest of the automobile industry, we had a good many extravagant ideas, one of which was using high-grade, heavy paper for general correspondence and for multigraph letters, and we find there is quite a saving in using 16-pound paper instead of 24- or 28-pound, and I don't think there is any question but what our correspondence receives just as much attention.—L. Guy Long, Gibson Co., Indianapolis.

**107—BUYS FOR 6 MONTHS ONLY**

With the idea of keeping down the number of forms used as well as the quantity purchased at a time, we believe, as a general thing, that a six months' supply of any printed form is the most economical quantity to purchase.—L. Guy Long, Gibson Co., Indianapolis.

**108—NO COLLECT TELEPHONES**

We do not accept any collect telephone calls from our customers. We do not accept collect telegrams unless the telegram is an order, in which case collect telegram charges are added at the bottom of the invoice.—F. K. Levy, Interstate Electric Co., New Orleans.

**109—NO ORDER ACKNOWLEDGMENTS**

We do not make an order acknowledgment, but we make shipment the same day an order reaches us and our invoice is mailed that day with either railroad bill of lading or express receipt attached.—F. K. Levy, Interstate Electric Co., New Orleans.

**110—WATCHES PENCILS**

We are watching such small expenses as pencils and erasers. We found there was no check on the number of pencils used and that there was liable to be considerable extravagance. Consequently we are having each person requisition from a central point the pencils used. A record is kept so that each month we are able to tell the number of pencils and erasers used by each person in each department and check extravagance.

Short ends of pencils are also turned in at one point and distributed in the stock and stockroom departments instead of supplying them with whole pencils.—L. Guy Long, Gibson Co., Indianapolis.

**111—SAVES \$40 ON TELEPHONES**

We require an official O. K. on all telephone messages that require an extra charge, and for all telegraph messages. This saves us \$40 a month.—Clarge G. Powell, Powell Supply Co., Omaha.

**How Bristol Put the Loan Over**

(Continued from page 98)

underestimated. Motor World has also had the credit for such loan of its timely cartoons.

That this educational campaign of publicity and advertising has been well thought of, and that results have been attained, may be gained from the fact that Bristol went "over the top" on its quota, the fourth day after the campaign opened, and the little city is now out for a doubling of the quota. It is indeed gratifying to know that in this city the success of the "Fighting Fourth" has been shared in to no uncertain degree by the aid given the campaign by a member of the automotive industry and by the assistance rendered by the leading automotive publication, the Motor World.

Other communities should follow suit, like their business with the big calls of the Government these days, and demonstrate in no narrow or mean way, the fact that the automotive industry is alive to its importance as a great business of the country and is loyal in these days when its very existence is threatened because of certain war measures deemed necessary. And it should be remembered that these war orders have been prepared because the automotive industry was not unified enough and was not willing to lend more freely of its resources, its men and their time, talents and money at a time when they could have volunteered.—Bristol Loan Workers.

**Boston Trying for \$1,000,000**

BOSTON, Oct. 12—In two weeks' time the committee in charge of the Liberty Loan drive of the Boston Automobile Dealers' Association have secured pledges amounting to \$757,500. Last week Congressman Alvan T. Fuller, the Packard agent, sent in his subscription for \$100,000. In the next few days the committee will work harder than ever to try to run the total up to the \$1,000,000. Had the trade not been hit so hard by the influenza epidemic, prohibiting open meetings, the six-figure mark would have been reached, the committee officials believe.

**Philadelphia Over the Top**

PHILADELPHIA, Oct. 12—At the end of the second week of its campaign for the Fourth Liberty Loan, the Philadelphia Automobile Trade Association has gone over the top, over-subscribing, with its allied groups, its quota of \$2,600,000 by \$1,663,000, or a total of \$3,713,000.

Not satisfied with this huge amount, however, the committees again will "carry on" during the coming week in an effort to double the original quota.

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 4

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, OCTOBER 23, 1918

Fifteen cents a copy  
Two dollars a year



U. S. BALL BEARING MFG. CO., (Conrad Patent Licensee) CHICAGO, ILL., U. S. A.



## Flexible Construction

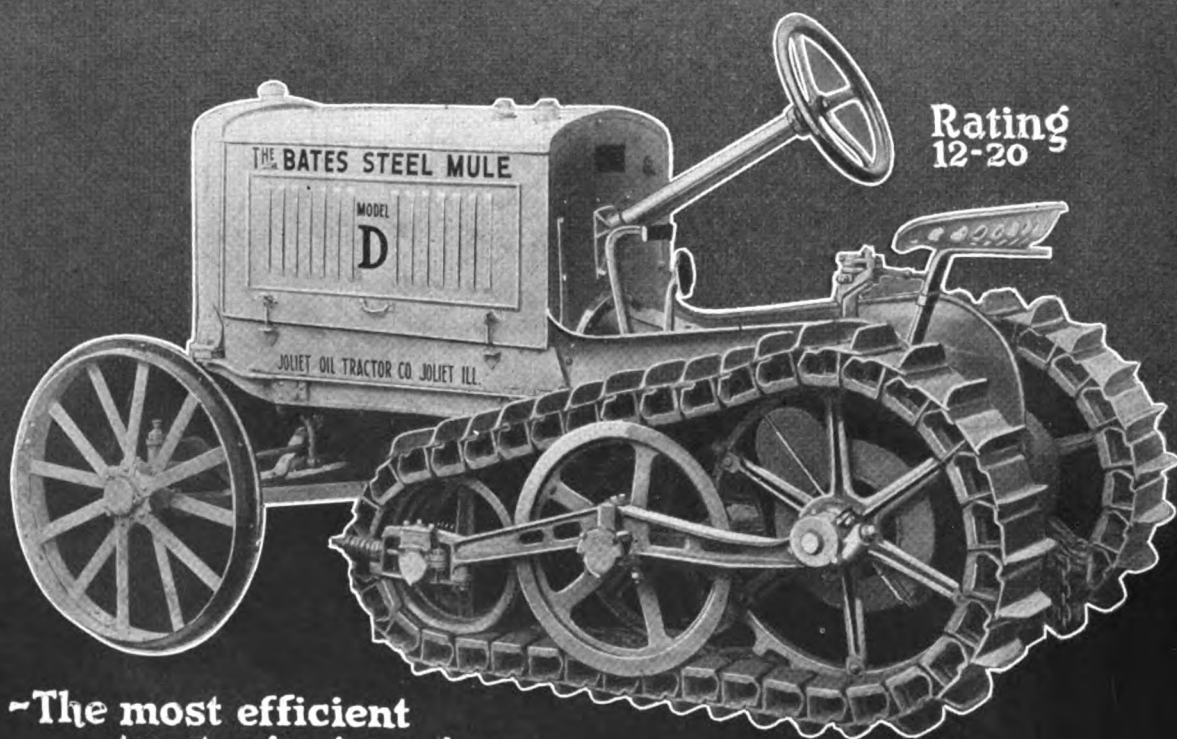
Its three point suspension and oscillating crawlers give to the Bates Steel Mule a degree of flexibility unusual in tractor construction.

This flexibility prevents any internal strains, keeps bearings in perfect alignment and is a source of comfort and satisfaction to the operator when riding it.

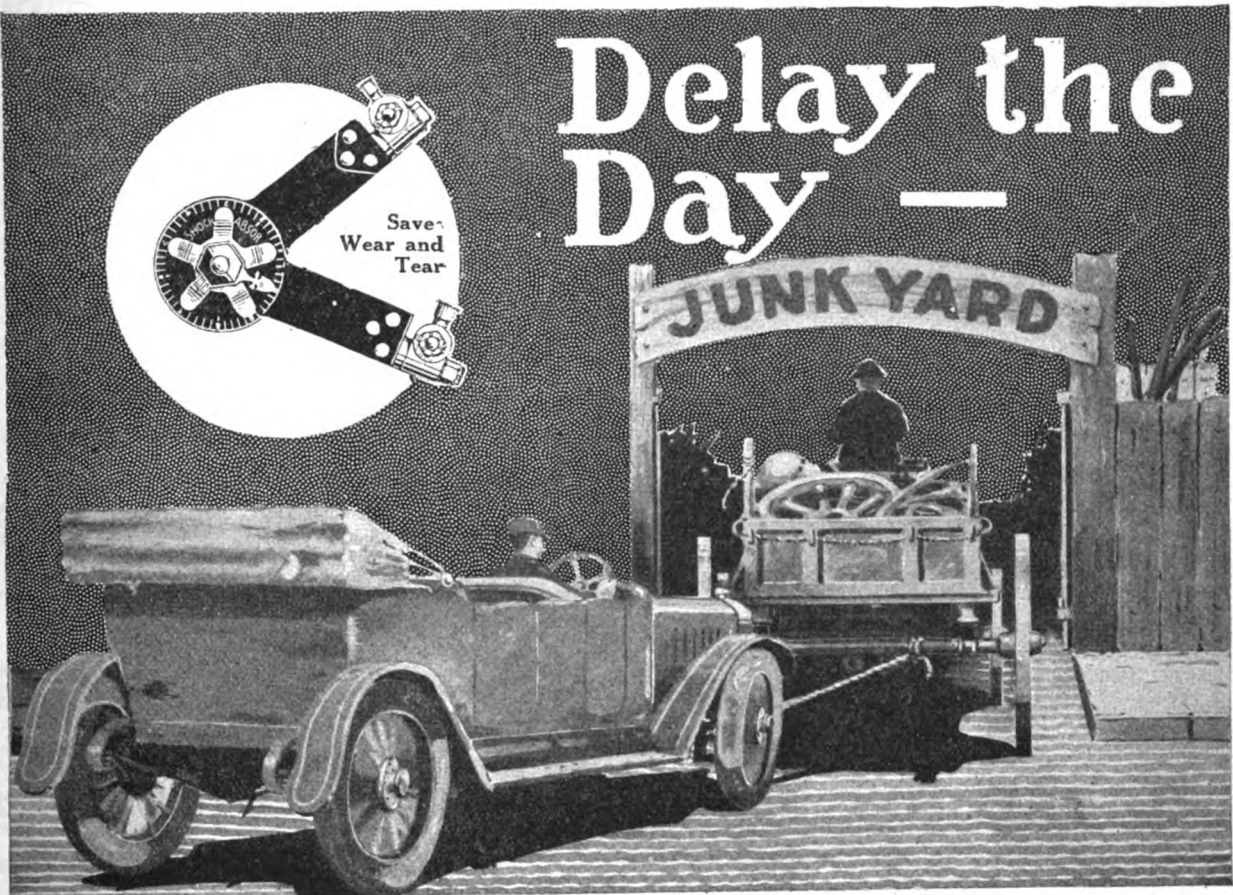
Crawler shoes that last a lifetime; Timken roller bearings; hardened cut gears; unit construction of power plant and heavy duty valve-in-head kerosene-burning motor contribute to the year-after-year serviceability.

*From our list of applicants will be selected a large number of our future dealers. If you are a progressive dealer and your name is not on our waiting list it might pay you well to get in touch with us.*

**JOLIET OIL TRACTOR CO.**  
397 Jackson Street Joliet, Illinois



~The most efficient  
tractor in America~



## Vibration Is "Automobile Tuberculosis"

Subtly and insidiously it undermines each part, saps its strength, loosening nuts and bolts, with resultant disalignment. Finally, when creak and rattle proclaim its presence, the repairman may temporarily forestall the end, but all too soon the junk heap looms closely in the offing!

And you counted upon several more years of service from your car.

The

# ***Hartford***

## SHOCK ABSORBER

*"Makes Every Road a Boulevard"*

is the implacable foe of vibration or "automobile tuberculosis." Its friction discs take up and nullify the quakes and tremors of rough road travel. It steadies a car over all kinds of inequalities, promotes joltless, jarless movement. It stops side swaying. Insures maximum life to chassis, axles, engine, tires and body because it protects them from road shock, the chief cause of their deterioration.

And all the while its use brings comfort. Delay the day of the junk heap. Add years to your car's life. Maintain its efficiency at par. Hartford-equip.

Invest in a set of Hartford Shock Absorbers now, when conservation counts so much.

**Hartford**  
**BUMP ABSORBER**  
—more than a Bumper

is an economic provision which saves many an unnecessary outlay for repaired lamps, mudguards, radiator, etc. Formidable, flexible, sure-protecting car guard.

Prices—5 Sizes: \$60, \$50, \$40, \$30; Ford, \$22.50

**Edward V. Hartford, Inc.,** 142 Morgan Street  
Jersey City, N. J.

Makers of the famous Hartford Auto Jack and Hartford Bump Absorber

BRANCHES: New York Boston Chicago Kansas City  
Distributors in Principal Cities Dealers Everywhere

**Hartford**  
**AUTO JACK**

is ready when you need it, to serve you with a minimum of exertion and with a maximum of convenience and efficiency.



# Raybestos

## ***Important Announcement to the Trade***

**T**HE Raybestos Company has discontinued the production of RAYBESTOS Woven Clutch Facings. Upon completion of orders now in hand, we shall manufacture *only* the new—

## **Raybestos Molded Clutch Facing**

RAYBESTOS Molded Clutch Facing is regarded by leading engineers as the greatest improvement in clutch facing since the inception of the multiple disc clutch. RAYBESTOS Molded Clutch Facings are not an experiment. They have been adopted as **standard equipment** by prominent manufacturers of automobiles and disc clutches. (Names upon request.)

RAYBESTOS was the **first successful** clutch facing and played a very prominent part in the development of the present-day clutch. RAYBESTOS Molded Clutch Facing is **another** great step forward which again demonstrates our leadership in the industry. Price no higher than previously paid for woven facings.

Excellent manufacturing facilities insure practically—

## **Immediate Delivery**

Every Raybestos Molded Clutch Facing stamped with the name "RAYBESTOS," is an unqualified *guarantee of quality, efficiency and superiority!*

*(Correspondence Invited)*

**The Raybestos Company, Bridgeport, Conn.**

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

The Class Journal Co.

U. P. O. Building, 221-241 West 39th Street, New York City  
 Horace M. Swetland, President  
 W. I. Ralph, Vice-President E. M. Corey, Treasurer  
 A. B. Swetland, General Manager

Business Department  
 Charles B. Shanks, Manager

Editorial Department  
 David Beecroft, Directing Editor  
 Ray W. Sherman, Editor  
 Stanley F. McKinn, Managing Editor  
 J. Howard Fife

## Branch Offices

Chicago—Mallers Bldg., 59 East Madison St., Phone Randolph 6966  
 Detroit—95 Fort Street, West, Phone Main 1251  
 Cleveland—Guardian Bldg., Phone Main 1143

Subscription, Per Annum (Postage Paid).....\$3.00  
 Foreign and Canadian Subscriptions..... 4.00  
 Single Copies (Postage Paid).....10 Cents

## Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to MOTOR WORLD.

Cable Address, "MOTORWORLD," New York

Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 243 West 39th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. C. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
 Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

Take Hold of Tractor Demonstrations .....	8
The Liberty Loan Went Over .....	14
Automotive Business, Not Side Lines .....	16
Two Thoughts on Selling Trucks .....	17
Get Rural Expresses Started .....	18
You've Got Sense—and Cents .....	19
Are You Teaching Women Mechanics? .....	20
Selling Farm Lighting Systems .....	21
Better Mechanics .....	22
Repairshop Shortcuts .....	24
Editorial Observation .....	26
Letters from Readers .....	27
The Law .....	29
Retail News .....	30
Automotive Equipment .....	31
Tractor Makers Protest Curtailment .....	34
Motor World Guide .....	44
Regular News Department .....	35-43
Coming Events .....	43

Advertisers' Index on Pages 94-95

# "NORMA" PRECISION BALL BEARINGS

(PATENTED)



The lowest cost per mile or per hour of service—the national emergency makes this an ideal toward which builders and users of cars, trucks, tractors, power boats and airplanes must strive. And in the effort toward its attainment, no small part is played by the electrical equipment of these automotive units.

Dependable ignition and dependable lighting are prime essentials to dependable, low-cost service. Which explains why builders of high-grade ignition apparatus and lighting generators, in standardizing on "NORMA" Ball Bearings, have so generally availed themselves of the proved "NORMA" dependability in speed service.

**Be Sure—See That Your  
Electrical Apparatus  
Is "NORMA" Equipped.**



**THE NORMA COMPANY OF AMERICA**

1790 BROADWAY

NEW YORK

Ball, Roller, Thrust and Combination Bearings

# Gredag Will Do More Than Any Yellow Grease Can Do—and Do It Better

Gredag Is a Combination of the Highest Grade Grease and Acheson Graphite, Which Is 99.9 percent Pure

An Elgin Scout Car recently ran from Chicago to San Francisco, to New Orleans, to New York and then back to Chicago, a distance of more than 12,000 miles.

At the beginning of the trip the transmission and differential were filled with Gredag and sealed.

At the end of the trip they were opened and the Gredag showed no signs of breaking down or wearing out. The car started immediately on a trip to Miami, Fla., and returned with the same Gredag, still in perfect condition.

Ordinary yellow grease has to be renewed every 3500 or 4000 miles.

Why did Gredag go so much farther? Do you know?

There are two reasons.

First, Gredag is a very high grade grease. We believe it is the only grease made by scientific methods.

Second, Gredag contains Acheson Graphite, which is 99.9 percent pure and ground so fine it may be blown through a screen with 40,000 openings to the square inch.

This amazingly fine, pure graphite seems to have an affinity for metal. It fills the microscopic inequalities of bearings and gears and makes them absolutely smooth. This eliminates friction and wear.

The melting point of Gredag is much higher than that of yellow grease. It will stand an almost unbelievable amount of punishment without breaking down.

The cost of grease is so small an item in the operating cost of a car that it is insignificant.

Yet some of your customers no doubt do consider the price seriously when buying grease.

Gredag is the most economical grease they can buy. The first cost may be a little more than yellow grease, but it lasts so much longer that it is actually cheaper in the long run.

If you want to sell the best, and of course you do, can you afford to overlook Gredag?

Better write the manufacturers for particulars today. Address Lubricant Dept., Acheson Graphite Company, Niagara Falls, N. Y.

---

## NO. DRY GRAPHITE MIXED WITH GREASE IS NOT AS GOOD AS GREDAG.

The only dry graphite that can be bought is mined graphite.

It contains 3½ to 18 percent of ground rock and other impurities.

The graphite in Gredag is Acheson Graphite, which is 99.9 percent pure. Acheson Graphite is never sold dry for lubrication. In Gredag it is perfectly diffused in the finest grade of grease.

It is impossible to mix dry graphite in ordinary grease and get it evenly distributed.

Mixing dry graphite in ordinary grease is a makeshift. And a poor one at that. Advise your customers against it.

---



## An Automotive Show Every Week

Time was when manufacturers withheld new creations and thrust them upon trade and public at the National Automobile shows in midwinter.

Dealers would delay making contracts and the purchase of stock until these big show classics had revealed the new and different products.

Now the shows are not depended upon to function for the trade as was the case in years that have gone by. New product is announced and put upon the market irrespective of season. And the trade is benefited.

MOTOR WORLD endeavors to give an "automotive exposition" to you and the balance of the entire trade every week during the year.

Whatever is new and deserving of description is featured by our editors. And, of most importance, you are told and instructed how to successfully merchandise and maintain the products of the industry.

Our regular presentation of comparative specifications of trucks, tractors, cars, lighting equipments, etc., for the advantage of selling and maintenance departments makes our paper of unique value to you and to the whole trade.

The big editorial work that MOTOR WORLD is doing so successfully, renders it of utmost value to the manufacturers who are desirous of reaching you at frequent intervals with the message of their new or standardized product.

# Selden Trucks



**The massive construction, colossal strength, gigantic motive power, speed in operation, power of endurance and reserve energy possessed by Selden Trucks give them the power to handle the big hauling jobs on a profitable basis.**

One to Five Ton Worm and Internal Drive Models. Write for full information.

**SELDEN TRUCK SALES COMPANY**  
ROCHESTER, N. Y., U. S. A.

When writing advertisers please mention Motor World—it identifies you

Digitized by Google



# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, October 23, 1918

No. 4

## DEALERS SHOULD TAKE HOLD OF THE Tractor Demonstration Situation

*Get Your State Officials Interested and Help Them*

The Sale of Tractors Will Be Greatly Increased by

- 1—More Demonstrations
- 2—Better Rules
- 3—Better Supervision

The Situation Is Hardly the Same in Any Two Sections—Dealers Can Benefit the Trade by Energetically Grasping the Job and Making These Demonstrations a Worth-While and Valuable Factor in Business Development

**T**HE tractor demonstration situation at present is beginning a healthy growth, but it needs a lot of stern fathering if it is to attain adult proportions within a reasonable period.

Profiting by the experiences of the motor car days, those interested in the tractor business should not have to spend years in finding out what and what not to do. And inasmuch as these demonstrations are going to be thicker than motor shows ever were—and they should be—it is the dealers, with their national distribution, who should lay a guiding hand on affairs and help put the tractor business over in the right way.

The situation is this: An investigation by Motor World in all the states of the Union has revealed three conditions that prevail. They are:

- 1—No demonstrations at all.
- 2—Demonstrations by dealers, run locally in a haphazard way.

3—Demonstrations promoted and supervised by state officials.

In the third case the number of demonstrations runs all the way from one up to a dozen or two, but there are few instances where the states have taken hold of the thing in an energetic way and supervised a large number of demonstrations.

The dealers are taking hold of the merchandising of tractors and showing the world how they should be sold. They should also take hold of the demonstration situation and show how demonstrations should be run to make them of maximum value to the industry.

ONE THING THE DEALER SHOULD REMEMBER: IT DOESN'T COST ANY MORE TO HOLD A REAL DEMONSTRATION THAN A POOR DEMONSTRATION. IT IS ONLY THE RESULTS THAT ARE DIFFERENT. FOR EXAMPLE: IN NUMEROUS COUNTY DEMONSTRATIONS HELD UNDER VARIOUS AUSPICES THE TRACTORS WERE RUN UNDER HIT-OR-MISS

RULES, THE RECORD OF PERFORMANCE WAS NOT SUCH AS WOULD INSPIRE CONFIDENCE AND THE RESULTS AS TABULATED AND IN SOME CASES PUBLISHED DIDN'T MEAN MUCH.

THE AFFAIRS HAVE BEEN MUCH LIKE HORSE RACES WITHOUT A REFEREE AND WITH EVERY MAN CLAIMING HIS OWN RESULTS AFTER THE THING WAS OVER.

The motor shows and contests helped make the motor car industry, and, similarly, tractor demonstrations will do a gigantic service to the tractor industry.

Motor shows and contests used to be run in a hit-or-miss fashion, but eventually rules for contests were standardized, supervision was made reliable, the tests were made to mean something and the result was engineering development and a vast volume of sales material. The motor shows are run on quite rigid rules, although they are not in the contest class. Even the president of a

dealers' association can't put anything over on the manager of his own show. It's been tried.

The agricultural officials and state college men are doing various things, some more actively than others, to help put the tractor over, but there is need for a gigantic propaganda to get the tractor on the map quickly and an avenue opened for the production and sales which are possible after the war is won and things go back to as near normal as they will go.

One state is sending out questionnaires to farmers, asking them all about their experiences with tractors. It is going to compile and analyze the information it gets, all of which should be a wonderful foundation for building a big tractor business. It will enable dealers to learn the what and why of tractor needs and performance.

Another state has just staged a series of demonstrations, and the commissioner of agriculture has been and is very active in promoting the interests of the tractor people and the farmers.

Just as every man who walks is—if he has the money—a prospect for a motor car, so every state official is a prospective tractor booster, for all admit the benefit it is to the farmer. This makes the dealer's way easier.

Wherefore, the dealers should take thought unto themselves and consider getting actively behind tractor propaganda. They should not sit and wait for the state officials to start. They should help the state officials get started. Neither should they wait for the factories to get into this work, for the ultimate tractor demonstration will be a local or sectional affair held in hundreds of localities, and no manufacturer has the time or facilities for getting out into the field and doing such detailed promotion. He may co-operate in many ways if someone else takes the burden of the work, but he can't do the job. *It is a job for the dealers.*

How could a manufacturer arrange demonstrations in forty New York counties, twenty Iowa counties, thirty Illinois counties, two dozen California counties and so on through the list? If each state held but twenty demonstrations there would be a thousand a season. *It is a job for the dealers, because those in each section can handle their own circuit independently of the other sections.*

There are several major points in the work the dealers should do. Dealers can get behind the movement as individuals and can run demonstrations of their own, but the better result in every respect will be secured if the dealers take things up in an organized way. An association is always more influential.

For example: The Massachusetts Division of the National Automobile Dealers' Association has a lot more influence than a few dealers working separately. More attention will be accorded in official circles and elsewhere.

Assuming that the dealers are all sold on the idea, and that they are prepared to do anything they can on their own part to boost the proposition, they have next to enlist the support of the officials

## Maryland's Questionnaire to Farmers

Owner's Name.....County.....  
 City.....Distance from town.....  
 1. Make of tractor.....When purchased.....  
 2. Size of tractor.....  
 (Give both drawbar and belt H.P., as 10-20.)  
 3. What kind of fuel do you use?.....  
 4. Number of plows pulled?.....  
 5. Kind of plow bottom (steel or chilled iron).....  
 6. How many acres in your farm under cultivation?.....  
 7. How many acres can be worked with a tractor?.....  
 8. Type of soil (sandy, clay, loam, rocky).....  
 9. Character of land (level, rolling, hilly).....  
 10. Use of tractor (Give the uses to which you have put your tractor and underline the principal uses).....  
 11. Has the tractor replaced any men or horses in your work?.....  
 How many of each?.....  
 12. Which do you believe is the more satisfactory for such work, the horse or the tractor?.....  
 13. Which is the cheaper to operate and maintain, the horse or the tractor?.....  
 14. How many days of the year do you keep your tractor busy?.....  
 15. Do you operate the tractor yourself, hire an engineer or use common farm labor?.....  
 16. If any trouble is experienced, what are the causes?.....  
 17. Is your bill for repairs high?.....  
 18. State, if possible, how much per year the repair bill is?.....  
 19. How much fuel and lubricating oil is used per day when plowing?.....  
 20. Average length of working day when plowing?.....  
 21. What is the life of a tractor?.....  
 22. How large must the farm be before the tractor is profitable?.....  
 23. Is the two-wheel, three-wheel, four-wheel or caterpillar type the best?.....  
 24. Do you do custom work?.....Does it pay?.....  
 25. How many acres do you plow per hour?.....  
 26. Does your tractor pack the soil?.....  
 27. What in your opinion are the reasons for lack of tractors in your community?.....  
 28. Can you say that your tractor has been a successful investment?.....  
 Additional remarks:.....

of their state. If the officials are already taking up the work the dealers should offer their co-operation.

If propaganda is necessary the dealers may do this by writing to farmers, talking to them and even addressing Grange meetings on the necessity for tractor support by the state's agricultural officials. Get the farmers interested and behind the movement, and do the same thing with civic organizations of every kind. If you can get organizations to pass resolutions to the effect that money spent in fostering the tractor movement is money well spent, see to it that these resolutions get to the proper authorities and get the newspapers to print them. Give the movement all the publicity you can and get everyone to talk tractors—and talk of you. *Thousands of city people, who never will again work on a farm, are interested in tractors and like to talk about them. It all helps.*

Aside from all this general interest and activity on the part of the state, there are the three big points: 1—*More demonstrations.* 2—*Better rules,* and 3—*Better supervision.*

The state can take care of the demonstrations and the strict supervision, and herewith Motor World presents what it considers a good set of rules. These rules were tried out this fall at the Pennsylvania demonstration at Harrisburg and worked well. They developed more real information than has ever before been developed at a demonstration. Even the rules of the national demonstrations cannot equal these. *It is suggested that dealers get their respective*

*states to adopt these rules. Then there will be uniformity, and something definite in the way of results will follow.*

The dealers should not forget that in this work organization is important. A good association secretary can do a world of good. In fact, the job might well be taken up nationally by the National Automobile Dealers' Association and a national plan of campaign laid out for members in pushing this work. During the next few years the members of the N. A. D. A. will have their tractor and car incomes running a neck and neck race. Just because the association sprang from car dealers is no reason why it should neglect the tractor. *The association must be automotive.*

Furthermore, dealers in different sections would do well to have the demonstrations arranged in circuits. The shows have been in circuits according to the location and size of cities, and much the same arrangement can be followed with the demonstrations. This is not necessarily so that models can be shipped from point to point, but so that machine experts can be on hand to be sure everything goes right. There is not the necessity for shipping tractor models that there is car show models, because any tractor from stock is plenty good enough.

The unsystematized condition of the demonstrating effort thus far is well indicated by extracts from the reports from the officials of various states.

In New England there is considerable tractor activity despite the belief of some that the East is no field for tractors. Massachusetts is running 36 tractors

*Motor World***Tractor Demonstration Rules**

1—ENTRIES—Only one tractor of each model of a manufacturer may be entered.

2—HOURS—These shall be definitely stated and the times adhered to.

3—AREA PLOWED—Take the number and width of plows drawn, the speed of the tractor as *advertised in the manufacturer's catalog*, and figure out how much land it will plow in a given period—one hour, two hours, or any other period, but make the period of time DEFINITE. Each tractor must finish its land in the allotted time to live up to its advertised claims.

4—SPEED—No tractor shall plow at more than 10 per cent in excess of its advertised speed. The speed shall be frequently checked and noted by the observer.

5—DEPTH OF PLOWING—All plows on any given gang must be set at the same depth—to be announced by the field manager—and kept there during the demonstration. Official observers will report immediately to the operator failure to plow the required depth and continuance of failure after warning shall cause the operator to be requested to desist from demonstrating for the period, a period being a forenoon or afternoon.

6—POSITIONS ON FIELD—Positions on the field shall be arranged as follows:

a—Drawing for positions shall take place preferably the day before the demonstrations begin.

b—The drawings shall hold for the entire demonstration.

c—The number drawn by an entrant entitles him to the plot bearing that number.

d—Where an entrant has no representative present his drawing shall be done for him under the direction of the field manager.

7—GROUP PLOWING—All entrants shall be allotted land in the same field, if possible; if not, in adjoining fields. All plows of the same number of bottoms shall plow near one another as far as possible.

8—FUEL—A tractor may use kerosene or gasoline, as specified in the entry blanks. Where kerosene is used gasoline may be used for starting, if so specified.

a—Gasoline—Tractors using gasoline shall have their tanks filled from the same tank wagon with the same gravity fuel. Tanks shall be sealed, and the seals not broken without the consent of the observer, and in his presence.

b—Kerosene—the same rules apply.

9—MEASURING FUEL—The fuel used shall be the amount required to refill the tractor's tank. Accurate records shall be kept of refillings throughout the demonstration, and at the end of the demonstration all tanks shall be filled full, as at the start.

10—STARTING TIME—All tractors shall be at the grounds for filling with fuel a certain period before the starting time, depending on the number of entries. All must stay to the finish. Any late entrants may be barred from starting.

11—OIL—Entrants may choose their own oil. Reservoirs shall be filled full at the start and the residue measured at the finish.

12—WATER—A complete record of

water added to radiator or cleanser shall be kept.

13—GUARDING—For 45 minutes after the end of an afternoon period the official operator and observer may be in the parking space for oiling. Tractors shall be under the guard and care of the management at times outside plowing periods.

14—INFORMATION—Each tractor shall have a neat poster, approved by the manager, in a conspicuous place, giving the following information:

a—Name of tractor, and model.

b—Name and location of manufacturer.

c—Name and location of dealer.

d—Horsepower of tractor.

e—Weight of tractor.

f—Kind of fuel being used.

g—Price of tractor at retail.

h—Plowing speed in miles per hour.

15—OFFICIALS—There shall be one exhibit manager, with as many assistants as he may desire. There shall be an observer for each tractor, who shall observe it at all times that the machine is under the care of the operator. Each entrant shall designate a manager, who is the only person who shall be recognized by the management as in charge of the machines entered. He shall wear a suitable badge furnished by the field manager. A reasonable amount of advice, but no assistance, may be given to operators regarding their tractor and implements, except with the approval of the field manager.

16—PERFORMANCE—All entrants must finish their land in a workmanlike manner.

that it bought for stimulating activity and plowing soil for farmers. Last spring there were about 100 tractors in the state, and it is estimated now by Superintendent of Farm Machinery Leslie R. Smith that there are now about 300 in use.

The demonstrations have mostly been privately promoted affairs. The most notable was on the Flintstone Farm at Dalton. Mr. Crane, the proprietor, had once or twice held a field day and this year got up a demonstration showing seven makes of tractor. *There are generally no special rules, any one can enter, and the results are not of maximum value.* The State Board of Agriculture sometimes assists in the promotion. The

machines generally shown are the Fordson, Case, Heider, International, Moline and Cleveland.

In the neighboring State of Connecticut the demonstrations are in charge of the county agents, which officials are doing good work in many states. Several demonstrations were held last summer, the last one, near Hartford, drawing 1500 people.

Maine's demonstrations have been, when held at all, mostly in the nature of exhibits at fairs, of which the state has a great number annually.

Again it is the county agricultural agents who take the lead in Vermont, where a half dozen demonstrations were held last summer. The makes generally

shown were the Cleveland, Fordson, International and Avery.

New Hampshire's county farm bureaus put on five or six under free-for-all rules, and brought out fair crowds to see the Cleveland, Fordson, Case, Moline and Heider. *But all the way along the line there is an absence of rigid supervision and real rules.*

Another evidence that the tractor is a comer in the East, and that it behooves Eastern dealers to get behind the propaganda and get into publicity with the movement is found in the North Atlantic seaboard states of New York, Pennsylvania, Delaware and New Jersey.

Particularly in the Empire State has progress been made, and the operations

of Calvin J. Huson, director of the Bureau of Production of the New York State Food Commission, is already meaning much to those dealers who have taken the automotive step.

There are many demonstrations on the slate this year, the schedule extending late into the fall. They are under the auspices of the County Farm Bureau Associations, one of which has been given the set of Motor World rules recommended in connection with this story. Also they are under the auspices, conjointly with the farm bureaus, of the New York State Food Commission, which has direct supervision over ten demonstrations aside from the large one at the State Fair in September.

Prior to the demonstrations invitations were sent to 100 tractor manufacturers. Preceding each demonstration letters were sent to the Granges and farm bureau committee men in the county in which the demonstration was to be held, and also to neighboring counties. Just prior to the demonstration a news item was sent to all the daily and weekly papers in the same county. Thousands of posters have been printed and sent to the farm bureau managers to be distributed throughout the county.

#### Fourteen Makes Entered

From 9 to 18 different tractors of from 8 to 14 different makes entered these demonstrations. Only one of the same size of each machine was allowed to enter, and aside from that there were not many rules and regulations. Had there been more systematic rules and a more rigid supervision, the results would have been of immeasurably greater benefit. The only reason there were not these rules is that no one ever had taken up the matter of rules and supervision, and suggested or insisted that the contest be run in regular contest form.

The makes generally represented were Cleveland, Moline, Fordson, Maxim, Chase, Case, Emerson-Brantingham, Avery, International, Waterloo Boy, Bates Steel Mill, Titan, Mogul, Form-Tractor, National, Huber and Happy Farmer. Says Director Huson: "We believe we are doing much to promote the sale of tractors in this state, as we have purchased 70 which are loaned to farmers throughout the state. We conducted 20 tractor schools last winter with an attendance of 1200 students, and we are scheduling these demonstrations, which have an average attendance in excess of 3500 farmers. At each demonstration more than 25 tractors have been sold directly at sight to prospects."

#### Motor World Rules Followed at Harrisburg

An indication of what has been done in Pennsylvania is the tractor demonstration held at Harrisburg several weeks ago. This was the first demonstration at which these Motor World rules were applied. The demonstrations have been generally under private or county farm bureau auspices, and without rules or regulations aside from plowing an acre and measuring the gas or oil, until the Harrisburg demonstration was held,

which was under the partial supervision of David Beecroft, directing editor of Motor World. The results of the rules and real supervision were apparent in the results. All the competing tractors were shown according to their merit, and much valuable sales, advertising and engineering information was secured.

As a general rule, in the various demonstrations throughout the state, from 8 to 20 makes entered, and these have been principally the Parrett, Cleveland, Case, Emerson-Brantingham, International, Huber, Frick, Gile, Happy Farmer, Moline, Waterloo Boy, Interstate and Avery. The state has 35 machines, which are operated for the benefit of the farmers on fixed charges. Advertising for the demonstrations is done in county papers. An effort is made to get as many tractors as possible to demonstrate, and from two to three thousand farmers attend these demonstrations. There are 55 of these county agents scattered about Pennsylvania, each one of whom is anxious and ready to co-operate with anyone who is interested in the development of the tractor business. In fact, that is part of the county agent's occupation.

In the little state of Delaware a demonstration was held last spring at which five different makes performed before a thousand farmers from all parts of Delaware and from the eastern shores of Maryland. It was put on by the Kent County Farm Bureau at Dover, and the expense of publicity was taken care of by the Farm Bureau. The rules were made by the committee. The tractors were put on a two acre strip, and the time and fuel consumed in plowing the land were measured. The results were printed in the county papers and in various other publications throughout the state.

New Jersey is also getting into the tractor demonstration work, but has not made great progress as yet. There is, however, a fertile field here for tractor work.

#### Dixie Land Is Very Active

That great section of the country south of the Mason-Dixon line is another fertile field for automotive products, and there is every reason why the southern dealer should take hold of the tractor demonstration situation and help get it on a right basis. Here, as in other sections, there is need for real rules and rigid supervision of these contests. In Maryland the State College and the county agent have put on five or six demonstrations this year, the county agent being generally in direct charge, the college specialists assisting.

The rules for entry have varied, with but one exception. The rules mention only the depth to be plowed, the time to begin plowing, and the method of working the land, so that each tractor finishes its own dead furrow. In one tractor demonstration at Wye Mills, the amount of fuel was measured for discing and for plowing a certain size of the field.

The advertising of these demonstrations is handled usually through committees appointed by the county agent. Postal cards and stories in the local

newspapers inform the farmers of the proposed tractor demonstrations.

From seven to fifteen different makes usually enter, through the distributing branches, the manufacturers or the dealers. These makes have generally been the Wallis, Cleveland, Moline, Fordson, Chase, International, Emerson-Brantingham, Frick, Turner, Sandusky, Happy Farmer, Avery, Case and Huber.

The State of Maryland is deeply interested in this question, and F. A. Wirt, specialist in farm machinery in the Co-operative Extension Department of the State College, is collecting information on the use of tractors which will be published some time this winter. This consists of a series of questions addressed to farmers which are printed elsewhere in connection with this story.

#### Agents Conduct Demonstrations in Virginia

Several demonstrations were conducted in Virginia by the agents of the various tractors. The Universal Motor Co. in Richmond had a demonstration in May. Quite a number were held under the auspices of the State Farmers' Institute at Blacksburg, Va., Aug. 7 and 19. Ten to twelve tractor companies were represented. In the early spring the State Council of Defense secured 250 tractors from the Fordson people, which were distributed throughout the state, thus planting the seed of a tractor business for all dealers. No demonstrations have been held in West Virginia, which indicates that there is a field here for the operation of dealers in such sections as are suitable for tractor work.

None of consequence are being held in North Carolina, except some Fordson demonstrations in various counties under the auspices of the local county agents of the Agricultural Extension Service. Considerable publicity and promotion work is being done through county agents and newspapers and field workers in state service, and considerable popularity for the tractor is anticipated within the next few years. The tractors which have been most active in demonstrations in this state are the Cleveland, Fordson, Moline, Avery, International, Deere, Sandusky and Staude.

The Extension Division of Clemson College has been holding demonstrations in South Carolina, advertising them in the daily newspapers, and endeavoring to stimulate as much interest as is possible.

#### Georgia Defense Council Demonstrates

The State Council of Defense in Georgia has put on four, at Albany, Dublin, Commerce and Rome, and the Chamber of Commerce of Moultrie and the Colquitt County Fair Association of that town are anxious to have a demonstration Nov. 12 to 16. A demonstration also has been considered in connection with the Augusta fair.

The State of Florida does not take any part in the demonstration of tractors, and there is no schedule under state auspices. Demonstration work in this state needs considerable stimulation—and perhaps the dealers need it also.

*There are no set rules, and not much of a schedule of demonstrations in Kentucky. Demonstrations in Tennessee are under the direction of the Division of Extension and the State Experiment Station.*

Practically no demonstrations have been held in Mississippi, but a number of short courses for farmers have been put on in gas engine operation and tractor operation and maintenance. Most of these have been held at the Mississippi Agricultural and Mechanical College. One was held at Memphis, Tenn., and another at the Alcorn Agricultural College, which is a colored institution. Other short courses are planned for December and January.

No public tractor demonstrations were held in Louisiana, but the state is considering taking up the work. W. R. Hirsch, Secretary of the State Fair of Louisiana, says that there is a big increase in the use of tractors in that state, all of which indicates the need for greater dealer activity in this matter.

#### More Demonstrations Needed in Middle West

Out through the middle western country there ought to be more demonstrations than there have been, and dealers ought to be more active in tractor work than they are.

In Ohio about 15 demonstrations have been held in different counties during the summer, promoted by the Farm Bureau Association and managed directly by the county agricultural agents. They are advertised by posters and through the local newspapers. Generally from 10 to 16 tractors enter. The state is doing its best to promote demonstrations and would be greatly benefited by co-operation from dealers.

There have been no demonstrations of consequence in Indiana, although there was an exhibit at the Indiana State Fair, Aug. 31 to Sept. 7.

Some demonstrations have been held in Illinois, but not in proportion to the place which that state occupies in agriculture.

From two to ten tractors have entered several demonstrations in the State of Michigan, but there has not yet developed sufficient interest in this work.

There was quite a demonstration at the Wisconsin State Fair at Milwaukee, and it was the only one under state auspices. Wisconsin is a fertile field for the sale of tractors, and the Milwaukee distributors should begin campaigning on their dealers for the promotion of demonstrations and sales work.

#### Southwest a Great Field

Down in the southwest where the farms are large, and the tractor has been an accepted device for some time, there possibly isn't the opportunity for small local demonstrations that exist in the east, but nevertheless there is opportunity for demonstration, and the dealers and distributors should be paying active attention to this work.

There is a good field for dealers to enlist state interest in Missouri. A tractor demonstration was held at the Missouri State Fair at Sedalia, in August,

and some individual demonstrations have been put on by dealers, but the state has not taken the thing up in a big way.

In Kansas the national demonstration was held at Salina, BUT EVEN AT THIS AFFAIR THE RULES AND REGULATIONS WERE NOT SUCH AS TO BRING FORTH THE BEST SALES, ADVERTISING AND ENGINEERING INFORMATION REGARDING TRACTORS.

In Arkansas the state has not been paying particular attention to this work. Dealers should get the state interested.

Arizona is much more interested. A big tractor show is planned to be given at the Arizona State Fair in Phoenix, Nov. 11 to 16. Fifteen to twenty different makes are expected, and the demonstration will be partially competitive. Realizing the room for criticism of the ordinary tractor test, the management does not intend to give ribbons. The plans are to have plowing, discing and harrowing demonstrations, at which records will be kept as to the rate of plowing, etc., and the consumption of gas and oil. This is to be supplemented by the dynamometer tests of one hour each on firm and soft ground. In addition it is hoped to put special stress on the accessibility and adaptability of the machines shown. It is planned to issue official statements of the performance of each machine rather than to award prizes.

Nothing is being done by state or government offices to promote the use of the tractor in Arizona. A number of conditions unite to make the tractor particularly desirable in the principal agricultural districts of the state, however, and they are coming in in fairly large number. County Agricultural Agent H. C. Heart estimates that there are probably 250 tractors in the Salt River Valley alone, which includes about 270,000 acres of irrigated land. Representatives of probably 15 makes are on the field, and indications are that a great number of tractors will be purchased there this fall and winter.

In New Mexico no demonstrations are being held, except by local dealers, which indicates that in the absence of states interested in this work the dealers are taking hold of the matter and operating in a commendable way.

The State of Texas has not yet taken the matter up actively, which is a matter for the consideration of the dealers there.

#### Conditions in the Northwest

North Dakota has held two tractor demonstrations this year, but does not plan any more this season. There was one held at Minot under the auspices of the Association of Commerce of that city. A large crowd attended. In South Dakota the promotion of tractor interests is being left largely to the manufacturers and dealers, and there is an opportunity for getting the state interested in the work.

*Wise—Sure—Safe*  
Buy War Savings Stamps

## Tractor Status in Intermountain Sections

Tractor demonstrations have been held all season at all the large county fairs and at the state fair in Colorado. These demonstrations were entirely advertising in character, and were not held under any auspices, other than those of the manufacturers themselves. There were no rules governing demonstrations, even such as were adhered to at the National Tractor Exposition. Fuel consumption, power delivery, etc., were not recorded. In a few instances these demonstrators plowed land in order to illustrate their machinery in action.

There is a tractor committee on the Council of Defense. A survey of the tractors in the state has been made, and the county council of defense have been instructed as to how they may better utilize existing tractors by putting them to use, and it has been made possible for persons in the various localities quickly to get information on tractors, either for use or for purchase. There are about 3000 tractors in operation in Colorado, according to this survey. The use of tractors is taking hold about as fast as dealers can handle them. There is a great need, however, for further instructional demonstration work. Among the tractors which exhibit are the Wallace, Cleveland, Bates, Case, International, Avery, Four Wheel Drives and Emerson-Brantingham. The state has taken hold of the work in a commendable manner.

No demonstrations are held in Utah under state auspices, although it is possible some of the farm bureaus may foster them. The Universal Car Co. of Salt Lake City, which handles the Ford, and also the Ford dealer in Brigham City, held demonstrations of their own, so as to promote the sale of their own tractor.

#### On the Coast

Several local tractor shows were held in different parts of Wyoming, under the auspices of local organizations, or local dealers. The makes generally entered were the International, Emerson-Brantingham, Hart-Parr, Case, Avery and Fordson.

National Tractor Association rules were used for the demonstrations in Idaho, of which, however, there haven't been a great many. The first real demonstration was held at the State Fair in September. The movement is taking encouragement from farm papers, the food administrator, the director of commercial economy, the university and the university extension department. Dealers should investigate the situation locally and co-operate with these departments as far as possible.

No tractor demonstrations of consequence have been held in Montana, except at some of the fairs.

The tractor business in the State of Washington was given a big boost by a demonstration held in May, at Pullman, where the state college is located. The soil was typical Palouse farm land, some of which was fairly level and most of it quite hilly. Some of the side hills had

(Continued on page 43)



# Winter Business

*Make Money So You  
and Your Workers  
Can Pay for the  
Liberty Bonds They  
Have Bought*

## The Greatest Need This Winter

**W**HAT do you think the trade needs this winter more than anything else?

It is the same thing it needed last winter, only it needs it more this winter than it needed it last winter.

That thing is men who can produce action.

It is one thing to have a flock of ideas about how to do things and quite another thing to get things DONE.

Let's take an example: Here is the Model Garage in almost any town of medium size. The boss used to have a car agency—he still has it, but he hasn't any cars.

If he did have any cars he probably wouldn't sell many this winter, because there is no grand rush these days to take away from dealers the few cars they have.

But The Boss still has his salesroom, his service station, his parts stock, and all the rest.

The overhead is still there.

The Boss has subscribed to the Liberty Loan—for which we all thank him—and so have all the people in his organization. Now the job is to pay for the bonds. Somebody's got to employ somebody. Business must be kept going.

If the Model Garage isn't kept going this winter it is going to be a liability to the community, to the state and to the nation at large.

Why?

Because it won't produce anything for

the nation. It will pay no taxes, support no workers, pay no salaries, buy no supplies from folks who make them. It will be an empty building with nobody home.

But supposing The Boss gets an idea that he ought to keep going if possible. He determines to stick, and he sits down in the office and tells every one he's going to stay in business as long as he can.

He displays fine spirit—but poor judgment.

Why?

Because the way to keep a business going this winter is NOT to sit down in an office with gritted teeth and wonder if the cash register is ringing. The thing to do is demonstrate that you have the TWO qualities of successful men: 1—Thought, and 2—Action.

If the man thinks and doesn't act he's a dream, a cloud, a bunch of mist, and some day a gentle breeze will waft him away.

Determine that you're going to economize—but NOT stop your effort. Then go to work.

If you find that your men are grabbing handfuls of waste from the bale and that YOU are paying for it, and if you decide to check that loss—DO SOMETHING ABOUT IT.

Put the waste up in pound packages and when a pound is issued from the stockroom charge it against the job on which it is to be used.

If you find that your shop isn't as full of work as it should be, and if you decide to get more business—DO SOMETHING ABOUT IT.

Send out letters to the owners of cars in your territory. If you want Motor World to write these letters for you we'll do it. There were some in the Winter Business Number last week. Did they suggest an idea to you?

If you find that you ought to have an automotive business, and if you decide that you need a truck agency—DO SOMETHING ABOUT IT.

The biggest need this winter in this business is for men who possess the initiative and ability to DO SOMETHING ABOUT IT.

### Well, What Do You Know About This?

**R**ALPH D. BRITTON, head of the R. D. Britton Co., Hartford, Conn., distributor of the Allen and Velie, has found a new occupation to keep him busy during the lull in passenger-car selling.

*He is cutting up cord wood in his garage and selling it at \$16 a cord. Incidentally, he is selling all he can get.*

Britton, who was formerly a member of the city government, was asked for an explanation of the wood-cutting plant in his public garage, and he smilingly remarked:

"At last we are in an essential industry. I went out to Simsbury a few days ago to look up a little wood for my own use. I bought my personal supply, and, as the owner of the wood would listen to reason, I bought the whole lot. My trucks are idle, so I can utilize them to good advantage and keep the boys busy. Incidentally, they like the change."

A small gasoline engine runs a sizable buzz saw. The entire east end of the Britton Garage is used for storing the wood, which is hauled in trucks and delivered in like manner. Former Councilman Britton found a ready market for his wood, which is of very good quality.

Does this give you an idea?

### WAR SAVINGS STAMPS

'Nuff Sed—

They are awaiting your ownership. Your investment in them will meet with the unqualified approval of Uncle Sam.

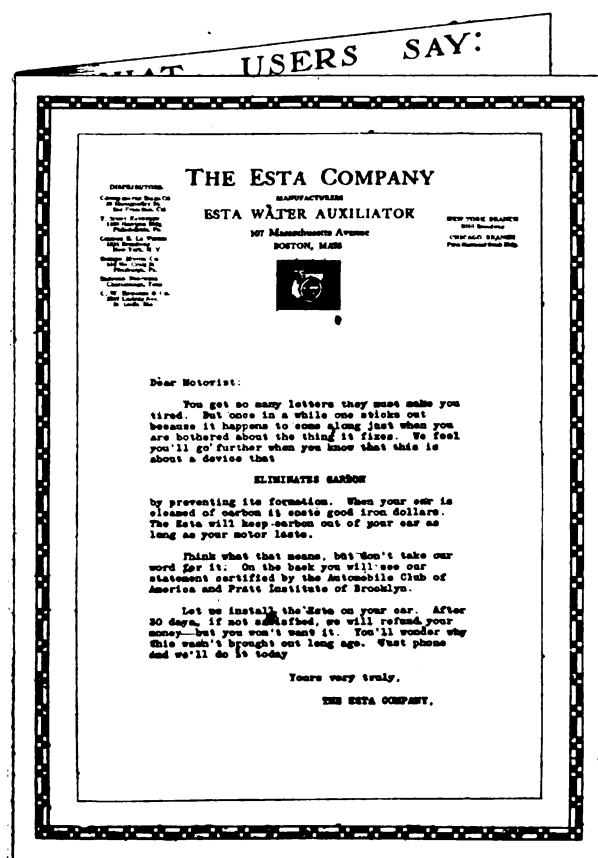
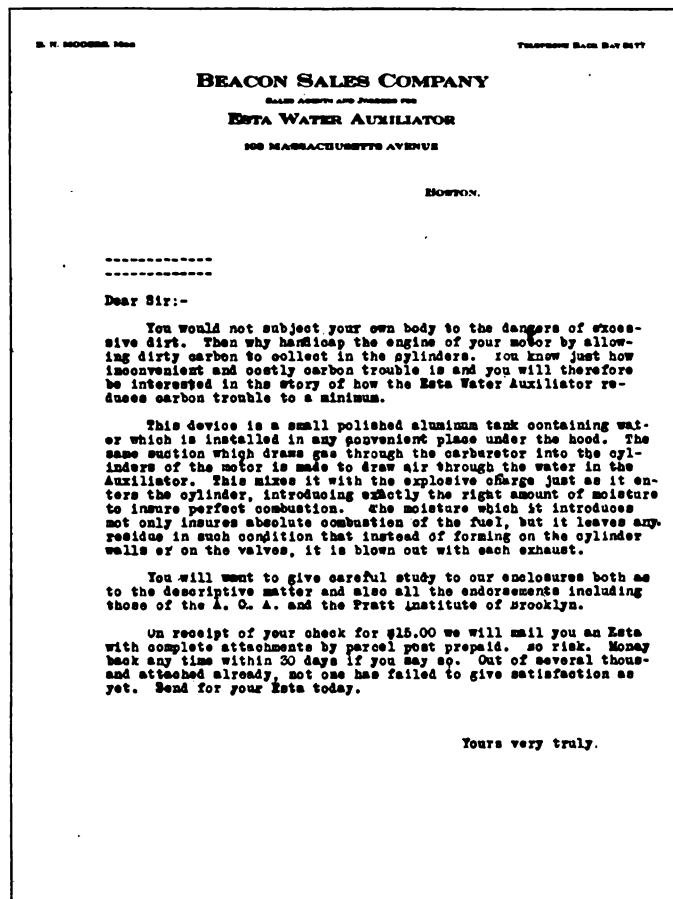
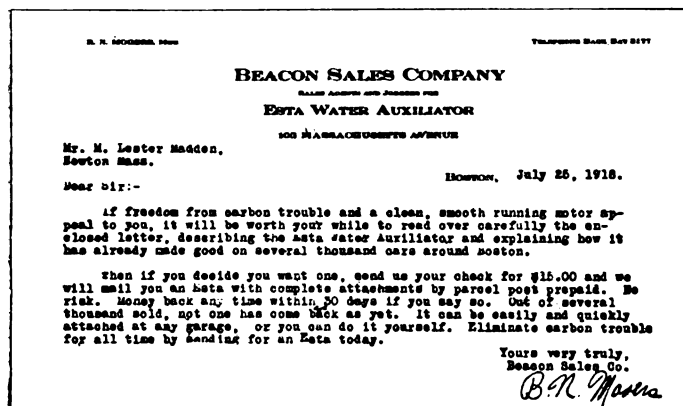
**Buy Them To-Day**

## Send Out Some Form Letters and Bring In Some Business

If you go out and call on customers, you can see possibly ten people a day; but if you see that many you'll be going some. Yet you can see hundreds daily if you make your visit by means of a form letter.

Form letters will get you business. Some were printed last week in the Winter Business Number, and if none there suit you we'll try to write some that you will like to use. On this page is an illustration of what a form letter can do. If this man did it YOU can do it. Why not try? A try costs little, and may be the means of selling goods, filling your shop, cutting expenses, or doing some other thing that will help you make money and survive the period of a wartime winter.

## This Letter Paid ★ ★ ★ ★ ★ This Letter Failed



## Here's the Story

**B.** M. MOOERS, who sells the Esta Water Auxiliator in Boston, compiled a prospect list. He dashed off a brief letter on a half sheet letterhead, enclosed the folder shown at the left, mailed it to the first forty names on the list and got back 9 orders with checks for \$15 each.

Along came a wise advertising man. He said, "That's no way to write a sales letter. I'll show you how." And he did.

He wrote the long letter shown above. It was mailed to the next 500 names on the same list, and back came only 3 orders with checks for \$15.

The short letter and big four-page circular pulled 22½ per cent orders; the long letter pulled less than 1 per cent.

There are many reasons, of which the following are a few: The successful letter is brief but tells it all; it is on a half-sheet, which makes it look brief; the folder gives additional information if the reader wants it; the long letter tries to tell too much, and is a poor sales letter anyway.

# \$44,381,850

*That's Only Part of the Liberty Loan Total Piled Up  
By the Automotive Trades*

## FOR LIBERTY

**T**HE Liberty Loan went over. It is a little early yet to know exactly how much of a push the automotive trades gave it because figures are a long time in coming in. But anyway, the partial total is given herewith and it is a pretty husky partial total at that. New York heads the list, which was to be expected, for New York is a big town in the first place and in the second place the organization that was behind the drive was second to none in the country.

New York—The metropolis went over the top in great style in the Liberty Loan drive. Those who set quotas thought they had set the dealers quite a task when they put down a quota of \$20,000,000 for the New York trade—and so did the trade. But the total of \$20,151,000 that was rolled up shows that it wasn't so hard after all. This is how it was done.

Organization did it. There were eighteen days to the drive. The leaders decided that much would be lost by appointing a permanent headquarters so 18 headquarters were appointed. A different dealer was headquarters each night, and each tried to outdo the other in the way of extensive and expensive theatrical entertainment. Result—the populace flocked to the Broadway salesrooms and signed up for bonds.

Boston—The Boston automobile, accessory and tire trades made a remarkably fine showing in the Liberty Bond drive, and at noon Saturday the amount checked up was \$1,286,000. It was expected that it would jump above \$1,300,000 before the books were closed. The drive was under the direction of C. P. Rockwell, of the Nash, who took over the work when C. E. Coe of the Chevrolet entered army work. The largest single subscription was \$110,000 by Harry Noyes, the wholesale dealer for Buicks and G. M. C. trucks. Alvan T. Fuller, with the Packard, bought \$100,000 and J. W. Maguire, Pierce-Arrow, \$65,000. The three largest corporations were the Noyes-Buick, \$200,000; Fisk Rubber Co., \$105,000 and the Ford Motor Co., \$90,000. The Noyes-Buick subscription was

City	Amount
New York .....	\$20,151,000
Columbus, O. ....	350,000
Des Moines .....	366,000
Pittsburgh .....	500,000
Philadelphia .....	5,243,450
Kansas City .....	4,672,800
Omaha .....	248,100
St. Paul .....	150,000
Minneapolis .....	300,000
Portland, Ore. ....	1,000,000
Milwaukee .....	387,400
Hartford .....	80,000
South Bend .....	1,000,000
Austin .....	100,000
San Antonio .....	220,000
Dallas .....	450,000
Houston .....	310,000
Waco .....	115,000
Galveston .....	125,000
El Paso .....	200,000
Albany, N. Y. ....	1,000,000
Phoenix .....	60,000
Boston .....	1,364,700
Buffalo .....	392,100
Birmingham .....	30,000
Memphis .....	1,000,000
Chicago .....	4,566,300
<b>Total .....</b>	<b>\$44,381,850</b>

exclusive of the \$110,000 bought by Harry Noyes, so his individual and firm total was \$310,000. This was the first time the tire trade worked with the motor firms, for they were with the rubber division previously. There were nine zones in charge of the following captains: John L. Hamilton, John H. Johnson, John T. Clinton, Ralph B. Nattleton, C. P. Rockwell, Karl G. Harig, J. T. Pace, G. A. Stoneburg and Ray H. Paddock.

Des Moines—The motor trades in Des Moines subscribed for \$366,000 in Liberty bonds. The Motor Trades team which was captained by R. J. Clemens brought in a total of 1261 subscriptions which placed it among the leading five teams. In the third Liberty loan campaign the local trades bought bonds to the amount of \$300,000.

Buffalo—The Buffalo automobile dealers' committee in the Fourth Liberty Loan

campaign secured subscriptions amounting to \$392,100. The quota assigned to this committee was \$350,000. A. W. Haile, head of the local automobile concern bearing his name, was chairman of the dealers' committee.

Columbus—The Fourth Liberty Loan drive in Columbus and Franklin county closed Oct. 5 by the city going over its quota of approximately \$12,500,000 by almost \$4,000,000. Dealers in automobiles, trucks and tractors took a prominent part in the "drive" as has been the case in previous loans. But there was no especial team devoted to soliciting subscriptions from the motor industry and thus the amount subscribed by the trade in Columbus is more or less of a guess.

But automobile men who are in a position to know believe that the industry, which includes dealers, repairshops, tire agencies and garages subscribed approximately \$350,000 of the loan. This is believed to be a very modest estimate in view of large oversubscription of the loan in this territory.

Pittsburgh—The automobile interests of Pittsburgh have made an excellent showing in the Fourth Liberty Loan campaign. The motor car and accessory dealers have subscribed over \$500,000, which is about three times as much as was subscribed on the third loan. There were eight teams of two men each appointed to call upon the different dealers and secure their subscriptions and almost every motor car concern in Pittsburgh came across with a 100 per cent subscription.

Philadelphia—At a late hour Saturday night, the Philadelphia Automobile Trade Association and its allies in the campaign for the Fourth Liberty Loan, known as Industrial Group No. 3, already had virtually doubled its quota of \$2,600,000 and will hold open till Monday noon. Up to 7 p. m. Saturday, \$5,175,100 actually had been subscribed, but it is probable that a much larger sum will be subscribed. Probably the group will go over the top 25 per cent.

Kansas City—Motor car dealers in Kansas City bought about \$200,000 worth of Liberty Bonds of the fourth issue; branch houses bought \$229,000 worth. Branch houses of the tire and accessory

manufacturers bought \$97,800 worth. Accessory dealers and garages bought some \$40,000 worth of bonds; employees bought \$85,000 worth. The total bought by the industry, therefore, at Kansas City was, estimated, \$651,000.

Reports of purchases were not segregated by industries and data on individual subscriptions not available. The campaign was handled by a general committee, with teams assigned to geographical districts.

There were more than 100 salesmen on the various teams from automotive establishments. These sold on the average \$15,000 worth of bonds apiece, to people not in the industry, or a total of \$1,500,000 directly creditable to these salesmen.

W. J. Brace, president of the Hudson-Brace Motor Co. and J. Frank Martin, manager of the Buick branch, were chairman and vice chairman of the Branch House committee. This committee secured subscriptions of \$2,250,000 from branch houses of Kansas City. Of this sum, \$229,000 is accredited above to automotive branch houses (not including implement distributors), leaving an additional \$2,021,000 which should be credited to the work of motor car men. The two and a quarter million was nearly a million more than was secured from branch houses in the third loan.

Another total for which a motor man, and his assistants in his own business, was largely responsible for was the half million from the Third ward division; George Hamilton Stone, manager of the Sam. F. Baker Motor Co., gave over his entire sales establishment with offices, rooms and equipment, salesmen and cars, to this division for the campaign, and acted on the advisory committee for women covering this territory. Recapitulating:

Purchases by automobile, truck and accessory firms and individuals, \$651,800.

Sales directly by automobile representatives, \$1,500,000.

Sales directly under the supervision of motor car men, \$2,521,000.

Total, \$4,672,800.

It is believed far larger results for the loan were obtained from the automobile industry, by thus distributing its sales ability, than if the industry had confined its efforts within its own circle.

**Philadelphia**—Automobile trade association and allied organizations in Industrial Group 3 went over the top, doubling quota. Total amount \$5,243,450.

**Birmingham**—One hundred dealers subscribed \$300 each. This was all that was asked, as Birmingham went \$3,000,000 over its quota.

**Tacoma**—Tacoma over subscribed quota of \$5,690,000 by \$110,000 achieved by roundup committee and flying squadron composed of representative members of the automobile club and dealers' association.

**St. Paul**—In Ninth Federal District no separate figures for motor dealers. In Twin Cities dealers worked as citizen members of teams. Officials cannot give individual figure for trade. Hundreds of dealers worked in push in this district. St. Paul estimate \$150,000; Minneapolis probably double.

**Portland**—Oregon motor car dealers did not work as representatives of the industry in Liberty Loan drive, hence no figures available as to amount raised by them. However, work of dealers had much to do with making Oregon second state in Union over top. Conservative to state at least \$1,000,000 subscribed through their efforts in Oregon.

**Milwaukee**—Milwaukee dealers total subscriptions \$387,400. Quota was \$160,000.

**Hartford**—The Liberty Loan Committee of the Hartford Automobile Dealers' Association, Inc., of which Fred W. Dart, Mitchell dealer, was chairman, gathered in \$80,000 on the Fourth Loan drive, which closed Saturday. Ninety per cent of the concerns in this city interested in automobiles came in on the loan. The dealers proper went solid. Accessory jobbers, tire shops and repairshops were counted in.

**South Bend**—Approximately \$1,000,000 was subscribed for the Fourth Liberty Loan by and through the efforts of the South Bend Automobile Trade Association, which includes automobile dealers, garagemen and accessory dealers. Time, money and cars were given freely and space donated in the salesrooms of dealers for Loan booths; salesmen spent their time in soliciting subscriptions. The county subscription was nearly \$6,000,000.

**Albany**—The automobile industry in Albany subscribed approximately \$1,000,000 of the \$16,500,000 Albany quota for the Fourth Liberty Loan, which was nearly double their efforts for the Third Loan drive. The Albany Garage Co., its officers and employees, subscribed \$200,000, the largest of any of the dealers. Chauncey P. Hakes of the Albany Garage Co. and E. V. Stratton of the E. V. Stratton Motors Co., Inc., were two of the nineteen Ward Majors in charge of the city canvass and many other dealers served as captains and lieutenants in the drive, although the motor car industry did not work together in an organized effort.

**Louisville**—No record has been kept of the total amount of subscriptions to the Fourth Liberty Loan by the automobile dealers in this territory. Practically all of them have purchased bonds but no concentrated effort as a unit has been made by the trade. The Louisville Automobile Dealers' Association has invested all of its surplus funds in previous issues of Liberty Bonds. A number of the dealers have been generous in lending cars for use by Liberty Loan salesmen.

**Omaha**—The canvass in Omaha in this, as well as in the third Liberty loan drive, was conducted by districts, regardless of industries. Not only this, but only a small fraction of the individual subscriptions were given out for publication.

The list which I have gathered comprises about thirty sources. In view of the fact that Omaha garages and other automobile business houses number about 300, I consider it safe to assume that we have here a fairly representative list.

Omaha went over its quota in good time, but with some difficulty such as has been experienced everywhere. The city quota was approximately \$10,500,000, and

indications are that the automotive trades carried a noble share of this.

Ford Motor Co.	\$135,000
United States Rubber Co.	15,000
Studebaker Corporation	10,000
Kelly-Springfield Tire Co.	10,000
Toozer-Gerspacher Motor Co.	10,000
Oakland Motor Car Co.	7,000
George E. Toozer	5,000
Firestone Tire & Rubber Co.	5,000
Douglas Motor Corporation	5,000
Overland Tire & Rubber Co.	5,000
Sprague Tire & Rubber Co.	5,000
Adair Lee Rubber Co. (additional)	4,000
Murphy-O'Brien Auto Co.	2,500
Jones-Opper Co.	2,500
Ajax Rubber Co. (additional)	2,500
Jones-Hansen Cadillac Co.	2,000
Nash Sales Co.	2,000
Western Auto Supply Co.	2,000
J. T. Stewart Motor Co.	2,000
W. E. Foshier	1,500
Van Brunt Automobile Co.	1,500
Ajax Rubber Co., Inc. (first)	1,500
Guy L. Smith	1,500
E. R. Wilson (farm lights)	1,500
United States Automobile Supply Co.	1,000
Clarke G. Powell (Powell Supply Co.)	1,000
Omaha Motor Sales Co.	1,000
J. Gerspacher (Toozer-Gerspacher)	1,000
Adair Lee Rubber Co. (first)	1,000
Hayward Cameron Motor Co.	1,000
Yellow Auto & Garage Co.	1,000
J. T. Stewart Motor Co. employees	1,100
Western Motor Co.	1,000

Total of partial list.....\$248,100

**Detroit**—Detroit, first of America's large cities to go "Over the Top" in the Fourth Liberty loan, over-subscribed its quota by \$5,953,220, which is 8 per cent more than its goal of \$73,387,980. Subscriptions for Detroit and Wayne County now total close to \$80,000,000.

Although the campaign in Detroit is officially closed, it has been estimated by executives of the drive that before Oct. 19, when the national drive is concluded, several more millions will be added. It has been roughly estimated that the industries of Detroit have contributed \$40,000,000 to the fourth loan, while the workmen have pledged \$25,000,000.

An additional subscription of the Ford interests for \$5,000,000, and \$3,200,000 from Dodge Brothers and their employees which were the principal items in Thursday's report, were instrumental in putting Detroit above mark, but the remainder \$7,000,000 was made up in large measure from uniformly high subscriptions from factory workers and second purchases by the corporate interests to place them in the double lists.

Four million dollars of the additional Ford subscription was credited to the previous subscription of the Ford Motor Co. and \$1,000,000 to the purchase of Henry Ford & Son, tractor plant.

Nearly \$2,000,000 worth of bonds were bought by the Packard employees and the Packard Motor Car Co. The company subscribed for \$1,000,000 worth, and the men and women who are making airplanes, trucks and airplane engines for the army and navy bought \$863,650 worth.

Another corporation that submitted its final report Thursday was the Cadillac Motor Car Co., whose record in the fourth loan has not been surpassed. Its total for the corporation and employees is \$1,487,285.

# Go Into the Automotive Business, NOT Side Lines

By Ray W. Sherman

**B**ENHAM, who handled the automotive lines of C. J. Reilly, Inc., in the little village of Lancaster, eighteen miles out of Callawassa, was mostly under a car when Reilly walked in.

Out in front stood a snappy Sennett sedan—Reilly's own—and the head of the Reilly activities looked the part. The tailor was buying numerous Liberty bonds with what the automotive dealer had paid for his fall outfit—and the looks of the outfit had a lot to do with an increasing Reilly business.

The end of Benham which stuck out from under the car was not the end that Reilly wanted to talk with, so he took a firm hold of a greasy shoe and drew the repairman's couch and its load out into the light of a bright fall day.

"Well—hello!" said Benham.

"Very fine," laughed Reilly. "What's the idea?"

"No help, lots of work, got to do it," explained Benham, for he knew it was one of the rules of the Reilly organization that the dealers should look like dealers, and that the only profit to be made from grease was by selling it—not wearing it.

Benham got up and the two walked down the row of cars to the office, for which Benham apologized somewhat under the same excuse of no help. The office fairly yelled for help—but there was none—so Benham said.

"How are the truck and tractor going?" asked Reilly, as he fingered several letters on the desk—received yesterday and not yet opened.

"I guess they'll make pretty good side lines," enthused Benham, "if —"

"Well I guess they won't!" snapped Reilly.

"Oh, yes they will," insisted Benham. "They're coming along fairly well, and I think they'll help out a lot in getting by this winter and maybe I can sell some next summer too. I know I can."

"You can do more than sell SOME," retorted Reilly. "You can sell a LOT. If you get an idea into your head that you are going to treat my automotive lines as SIDE lines I don't see why I'm not justified in treating YOU as a side line. Where do you get this side-line stuff, anyway?"

"Well, aren't they side lines?" asked Benham.

"Most assuredly NOT!" declared Reilly.

"Here am I trying to build an automotive business for myself—and for you—and you turn over the whole works by telling me all of my lines but one or two are SIDE lines. What do you consider is NOT a side line, Benham?"

"Why—cars, of course."

"Huh, cars!" sniffed Reilly. "Cars. You never made an honest dollar in your life selling cars. You might have if you'd gone at it right—but you wouldn't. You gave away price, service and parts and you've grubbed along in a pair of overalls like an ordinary mechanic, when you should have been using a pencil in the front office or out calling on prospects."

"You had a one-legged business. In the winter you thought you couldn't sell cars, and so you have always had dull winters with not much profit, even though you could have kept the curve up by soliciting repair business, if you had used the plans and ideas I have tried to force on you."

"And now comes a period in our national life when the year around is made like winter so far as selling cars is concerned—and what have you got? Nothing. You can't sell cars because there aren't any cars. And then I gather in a fine line of automotive stuff and try to get you running on a sound basis—and what do you do? You keep rooted in the back of your head the idea that you are always going to be nothing but a car dealer and that these automotive lines are SIDE lines. How do you get that way anyhow?"

"Well—" began Benham.

"Well nothing!" interrupted Reilly. "These lines are NOT side lines with me and they're NOT going to be side lines with you—if you handle them. You are not going to use the Sayanna truck, the Strongman tractor and the Britelite farm electric plant to make up for the losses you sustain on Sennett cars. If you can't run several automotive departments and make money you are not going to handle these things. If you want to dub along with the Sennett agency the way you have you can, but you're not going to take these other things and make side lines out of them. I can't afford to let you do it."

"What would happen if I did? Here's the Buck truck with its big branch house in Callawassa. It proposes to cover this whole middle state territory with its own

men and fill this country so full of Buck trucks that you can't drive over the roads without running into one of them. What kind of competition would you be for a selling organization like that?"

"I can't compete with a branch anyway," pleaded Benham.

"Oh, you can't! Well—you can and you can be the strongest competition in the world for any factory branch that is located eighteen miles from your home town—if you'll only make the truck a real line and not a side line."

"You are—or ought to be—in close touch with every man in this territory. You are a home town man. You know the farmers. You have—or should have—been in contact with them all many times on the sale of cars. They know you. They don't know the branch salesmen, who get through here only once in a while, so naturally they will stick by you—provided YOU will stick by THEM."

"Furthermore, some bright young salesman is going to get financial backing and open up a truck and tractor agency in this town, first thing you know. He'll make real lines out of his automotive products and will make himself headquarters for trucks and tractors, and if he does that where will you get off? You won't have as much chance as a child in the invasion of Belgium. You'll be cleaned out, backed clean off the boards."

"But help is—"

"Never mind what help is. I've also had that whole matter up with you, but you won't do as I tell you. You're making the same mistake a lot of other dealers are making. They think distributors and manufacturers ought to hand them these automotive lines because they're motor car dealers, but they're wrong. These new lines are going to be given to live men, no matter what they have handled before, and there is going to be a lot of new agencies set up by live young salesmen backed by intelligent bankers. The automotive dealer is going to be a live dealer."

"The situation hasn't changed a bit. The live ones are going to COME and the sleepers are going to GO—and go fast. It's entirely up to you."

"But—"

"Think it over for a few days," said Reilly, and he went out, kicked the starter and rolled back toward Callawassa.





*This is how Bailey, of the Mack truck in St. Louis, shows the town that the Mack is made of good parts and gets folks to look at his truck and talk about it. When they get that far he does the rest—but never rests*

*You Are Going to Sell Trucks, So Here Are*

## 2 Thoughts:

- 1—Forget All You Know About Passenger Cars and Learn Transportation.
- 2—Begin by Selling Tractors If Conditions Seem to Restrict Your Light Truck Field.

*By Clyde Jennings*

**T**HERE has been a Mack truck running around St. Louis with a parts board erect on it so as best to show all of the important parts of a Mack engine.

This appeared to be a little out of the ordinary, so the Motor World representative went out to the branch to ask Manager H. C. Bailey about it and what suggestions he had to offer to motor car dealers who wanted to sell trucks. Perhaps something about advertising. The results were quite unusual.

Bailey was busy drafting a letter that he mails out every two weeks or so to his prospect and owner list. But he had time to talk.

"There is a great difference between selling trucks and motor cars," he said. "This is best illustrated by an incident that happened at the recent Chicago display. After looking over the Pier, I went with a com-

panion to the Blackstone to see the cars displayed there. There was a couple looking and to all appearances they could afford whatever they wanted. They were looking at chassis—or the man was.

"The salesman was talking to the wife. He excused himself and came back with a triplicate picture of three machines, made by a real artist and handsomely colored. The combinations were wonderful, but the picture and the frame were more than that. That picture deserved a place in an art display.

"'Aren't they simply wonderful?' exclaimed the woman.

"'Which do you prefer?' asked the salesman.

"'Why, the center one is much superior,' said the woman.

"'Here, papa, I think we had better settle on this one right now,' she exclaimed to the man who was showing some interest in the make-up of the chassis.

"'Yes, the center one,' she said to the salesman, and the husband nodded a reluctant assent.

"What I said to my companion need not be repeated here. But that motor car salesman, while an undoubted success in his line, is not the man to sell trucks. In the truck world *you do not sell a certain machine, you sell TRUCKS. And that is what the motor car dealer must learn at the outset.*

"In our business we are not strong on employing motor car salesmen to sell trucks. They are trained to talk of the machine, its distinctive lines, its speed, etc. Usually the motor car salesman goes days and days without even a nibble at selling heavy trucks. He must entirely reverse his ideas of the selling business.

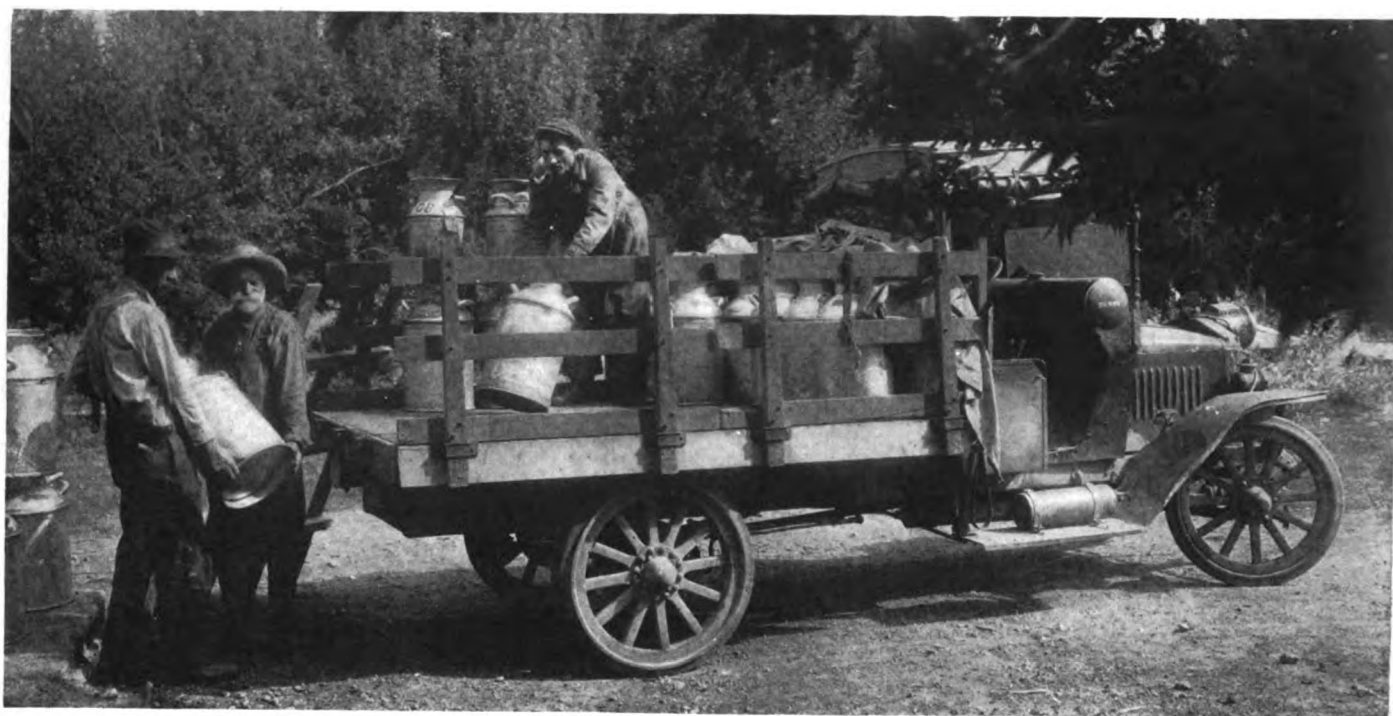
"So many of the customers have an entirely wrong idea too. Some years ago I called on a manufacturer about trucks. He said to me:

"'I am going to buy a truck, perhaps several at once. But I do not think it worth while to take your time or mine because I have settled on my truck. I have a ——— car, and it has given me such excellent service that I have concluded to buy a truck of the same make.'

"I knew something of the circumstances and thought that he was mistaken. So I asked questions and found that the proposition that he had to con-

*(Continued on page 32)*

# Get Some Rural Motor Expresses Started



## Here Is One That Is Making Money for Expressman —and Truck Dealer

**T**HE Mills Motor Corp. is running a Rural Motor Express between Denver and Evergreen and Denver and Morrison. It picks up lots of farm produce along the way and carries back to the farmers the things they want from the city.

The line is giving the farmers a service the railroads never could or never will be able to give, for it puts the railroad at the farmer's door just as the Rural Free Delivery service puts the mail and city newspapers on the front porch.

Moreover, lines like this mean truck sales for dealers. As time goes on someone else will start a line somewhere when they see how well the Mills Motor Corp. is doing. And then there will be more truck sales for dealers.

*The picture at the top shows the expressman loading milk at a farm. You can tell by the way the farmer holds his pipe that he has loaded many cans of milk onto this same truck and has saved himself many trips to town.*

*The center picture shows how the load looks along one of the good roads the truck travels over. Everything is tied down under a tarpaulin and the driver has just stopped to permit his picture to be taken.*

*In the lower picture the driver is shown unloading the milk in Denver and getting ready to take back to the farmer the empty cans and any other merchandise that the farmers along the route may desire.*

### Moral

Take a good look into the Rural Motor Express opportunities in your section and see how many prospective truck users you can dig up. It will pay.



*Said Brownsmith to Billjones:*

# "You've Got Sense—and Cents"

The Story of How a Near-Commercial Garage  
Became a Real One

By K. H. LANSING

**B**ILLJONES conducted what he *thought* was a commercial garage. He advertised in the newspapers that such was his business and at first he did fairly well, for he got considerable custom from merchants in the vicinity who had tried other garages and had become disgusted because of poor service.

But pretty soon his customers began to leave him, one by one.

"Don't see what's the row," said Billjones to a transportation company organizer whom he had met at a trade association gathering. "Mine is the only real commercial garage in these parts. The others are all passenger car storage houses. I'm the only fellow who makes a specialty of giving commercial car owners service."

Brownsmith, the organizer, flipped the ash from his cigar and was silent for a moment, although he saw it was his cue to say something.

"See here, Billjones," finally said Brownsmith, "I'm going to tell you something, and I don't want you to get mad. You have Speedforth & Zippalong's fleet of intercity transportation trucks at your place, haven't you?"

"Yes."

"Very well, then. Do you know that Zippalong told me only yesterday he was going to give his business to old Troubleton? That he is going to quit you cold?"

"Wha—wha—wha—," stammered Billjones, incredulous. "Leave me for old Troubleton? Say, quit your kiddin'."

"I'm not kidding," replied Brownsmith. "I never was more serious in my life. I organized the firm of Speedforth & Zippalong and I still take pride in their success, although I have no longer any connection with them and am organizing two more companies. And I'm going to advise Speedforth & Zippalong to take the step, unless—"

"What you got it in for me for?" asked Billjones, getting hot under the collar. "Aren't you a good customer of mine and don't I give you a square deal and good service?"

"Now, cool off and I'll give you some constructive criticism," said Brownsmith. "What do you call service, anyway?"

"Do you remember only last Friday," he went on, "that Speedforth & Zippalong had a breakdown of one of their trucks on Honk Avenue, beyond the city line, and telephoned to you to send out your service wagon, or a mechanic to fix him up? Well, he was so loyal to you that he had instructed his men to call your place in case of a breakdown instead of patronizing nearer service stations."

"Well; he told me he was just 35 minutes getting you on the telephone, although he got central promptly. Next, he said you told him you hadn't any mechanic in at that time. Finally, you sent a car out to tow his truck in. Fine 'ad' for him, wasn't it, to have one of his trucks with a big sign on the side reading 'Speedforth & Zippalong, Fast Motor Express, Unfailing Deliveries on Time,' towed through the city in broad daylight? He was so humiliated that he couldn't eat his dinner. And he said that the next day when the car had been fixed and he had it on the road it hadn't been cleaned properly."

"Now, he blames you for the whole chapter of mishaps, in this order:

"He had a breakdown near the city line, while on a first-class road, before he had a chance to meet any road difficulties because his car hadn't been inspected properly before it left your garage. The nature of the accident showed that."

"When it did break down he couldn't get your place on the 'phone because there was nobody on the job."

"You couldn't send out a service car because you haven't one—and he didn't know that."

"You couldn't get him a mechanic in time to fix him up on the roadside and let him continue to his objective point—because you have a loose-leaf system of labor. There was no mechanic on the job in reserve."

"You rubbed it in by towing him through the city and making a laughing stock out of his business."

"And then, to cap it all, you didn't see that his car was properly cleaned. Speedforth & Zippalong paid out a lot of money to have those trucks painted—I

know that. Cleanliness of apparatus is a big asset in a business like theirs, as it begets confidence and looks prosperous. It's good publicity. Merchants also appreciate it for delivery cars—probably to a greater extent than intercity transportation companies. Cleanliness and that spick-and-span appearance as a good advertisement are exemplified in the fire apparatus of a city. But it's part of a commercial fleet's stock in trade. *And you abused this chance to make good, too.*

"Tell you what you do, Billjones," continued Brownsmith, who saw that his words had brought conviction, as well as shame, "as soon as I get through telling you about where you fall short, hop into your runabout and beat it over to Zippalong and tell him you are about to institute a new era in your garage, or some such stall as that, and then PUT IT ACROSS. It's your only hope to save his custom."

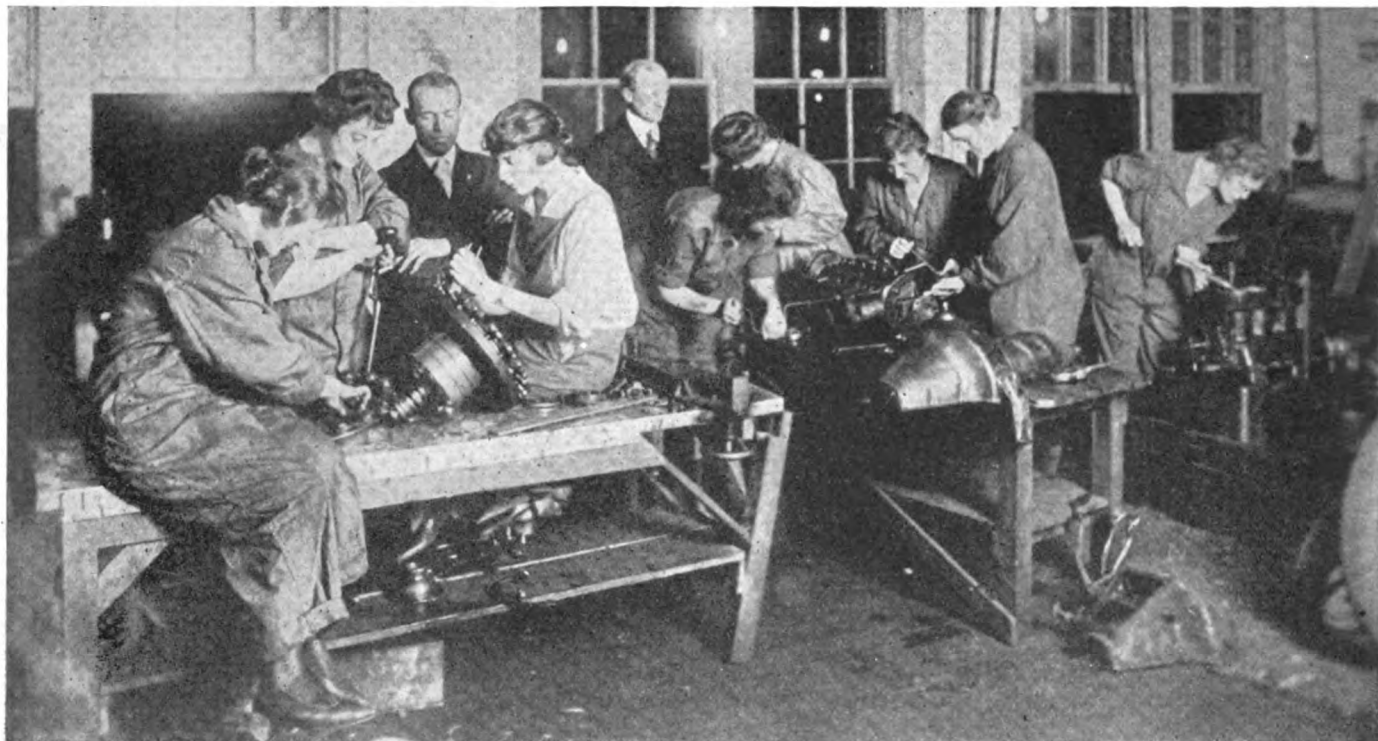
"If you value your business, hire a good solicitor for a while, or turn to the job yourself and shake down part of the business that some of these passenger car fellows are about to lose because of similar carelessness and inefficiency. Have your solicitor talk 'em into coming with you. Refer your prospects to me, if you really mean to follow my advice, and refer 'em to your bank. It's worth the effort, for you're skidding, by the great horned owl!"

"And say, old boy—one thing more. For the love of Mike, keep an accurate check-up of all cars leaving and returning, noting who calls for trucks, when they are to return, where going and when wanted, and buy yourself a time-stamping machine. Get your business mobilized, or get out of it. And I guess that'll be about all."

In three months when Brownsmith called again Billjones was whistling the latest popular air as he stamped his "Trucks Arriving" record with the time of two new cars belonging to Speedforth & Zippalong.

"Brownsmith," said Billjones, "because you are one of our best little teachers, I'm running an honest-to-goodness commercial garage—and am making dollars where I didn't make cents."

"Yes," said Brownsmith, "you've got sense—and cents."



*The women get right into overalls and dig into things in an earnest manner. While many of these girls will be "society mechanics," Lewis expects to secure several good workers for his own shop*

## Are You Teaching Women as a Solution of Your Labor Problem?

*Lewis, of Savannah, Is Doing It and Finds It Helps Business Too*

**T**O train women for the American Motor Corps, J. C. Lewis, the Ford dealer in Savannah, Ga., turned his garage over to the "machinettes" and supplied them with a trained automobile repairman as an instructor. After thorough instruction in repair and maintenance the young women are given practical repair work to do as an examination.

The mechanics' class of the corps became so large that it was necessary to divide it into sections, each section receiving instruction on specified days and evenings during the week until the course is completed. Two classes have already finished the mechanical course and the ranks are still full. Others are on the waiting lists to be inducted into the classes as fast as those in them have been graduated. These young women are already taking care of their own cars and those of their neighbors.

Incidentally Lewis has secured a corps of efficient and enthusiastic assistants. He has not only popularized his garage among the young women who drive machines, but men, young and old, are bringing their cars to him for the pure joy of seeing these trim young women work upon them. The Ford garage is running at capacity. Many old and abandoned cars are being pressed into service

again. Among the girls who are being trained are a number who will remain permanently as garage workers and repairwomen in the Lewis establishment.

Send Us Pictures of Women Workers



*The work is new, of course, and the experience is novel. One look at the semi-smiles in the picture tells that. But persistence wears off the novelty and then it becomes a purely business proposition*



*To Be Successful in Selling Farm Light*

# Dealer Must Be A Farm Engineer

---

*All of Which Is Far from Being  
as Difficult as It Sounds*

---

**P**UTTING the electric light on the farm will be a matter of making electricity fit the farm—not making the farm fit the new system.

A dealer must understand from the first that he has not ideal conditions to meet. He must take the farm as he finds it, and show the farmer how he can use electric light and power with the equipment that he already has. In other words, *the dealer must become a sort of farm engineer.*

The typical farm is one where the buildings have not been located according to any predetermined plan, but have grown up in a sort of haphazard way. Here will be the house, here the barns, there the windmill, all of them located frequently without any regard to being conveniently arranged as regards one another. For this reason, when the dealer comes to sell an electric lighting plant for the farm, he must show the farmer how it is possible for him to put it in the buildings arranged as they are now, and without making any changes in their location or adding new buildings—beyond a possible necessary building to cover the power plant.

The dealer will have to visit the farm and plan how he can bring all these into a plan which will put light in the house and barn, give power for pumping water, power for the household and dairy machines, and power for the small power equipment which most farmers have on their farms. This is in a way an engineering problem which the farmer ordinarily cannot do for himself but must look to the dealer to handle for him.

Were it possible to go on to the farm and induce the farmer to move some of his buildings, the problem would be very much simpler. However, this is impossible in a majority of cases. Farm-house, barns, pumps, wind-mill, etc., are in the nature of permanent improvements and cannot be moved readily. *Things must be taken as they are, and the dealer must have engineering sense enough to see how he can fit the power-plant to conditions as they exist.*

Of course, it happens once in a while that the farmer is about to build a new house or a new barn, or make some dif-

ferent arrangement about his permanent improvements. Dealers who have been successful in selling farm power and lighting plants have watched for opportunities of this kind and have gone to the farmer when he was making his plans, and have shown him how easy it was to put a power plant or an electric-lighting plant into his house or his barn.

Such chances do not come every day, however, and the dealer must take into consideration the fact that every time he sells a power plant it is up to him to consider things as they are at the present time. *It is for this reason that we say that putting an electric-light plant on to a farm is largely an engineering proposition.*

## Power Plant Heart of Farm

The farm power plant should be the heart of the farm. Here will be located the power which will put light in the house and furnish power for all of the small power equipment of the farm, for household, dairy, barn, etc. In many instances it will be easy to show the farmer how, by putting a little power plant building over his well, where he can apply the power directly for pumping, he also will have provided himself with a central plant from which he can operate all of the small power equipment on the farm, including light for his house and barn. In fact, this plan has been followed by a great many farmers who have put in lighting plants, and which have been planned for by the dealer who sold the power plant.

It probably will happen that conditions are different on every farm, as very rarely are two farms exactly alike. After the dealer has made one or two adaptations, however, he will find that it will be easy for him to make others. There is hardly a farm, large or small, for which the dealer cannot plan if he will give it a little thought and attention.

It has been the experience of dealers who have tried to sell lighting plants that the principal objection made by the average farmer is that he cannot afford it. A good many farmers think that it is necessary to have a separate installation for a lighting plant. Possibly they already have a gasoline engine that is located for their pumping plant and small power equipment. If they could be shown how it would be possible to add

the electric lighting plant to this and use the power plant they already have, *they would listen much more readily to the proposition to put one in.*

Other farmers will object that they cannot afford to put in the lighting plant just for the light alone. Then it will be necessary to show the farmer how he can use the power plant for the light and also as power for the other small machines which he wishes to run. It must be plain that in both such cases it is just merely a question of adaptation. There are numerous instances of where it was possible, by building one small building, say over the well, and putting in it a permanent installation of a stationary gasoline engine to make power available for all the operations of the house and farm except the field operations. These installations showed careful consideration of conditions as they existed, and the adaptations were admirably made. *In almost every case, too, the suggestions came from the dealer rather than from the farmer himself.*

In the first place, the dealer will be very apt to think that this is asking him to do something for which he has no ability. He will balk at the idea that he should be an engineer as well as a salesman. This is by no means the case, however. Once he gets out on the farm itself he will find that it will be very easy for him to make suggestions. Once he has made one or two adaptations it will be easy for him to do it on any succeeding farm. *The problem is difficult only in anticipation.*

The beauty of this plan of selling farm lighting plants is that, after one or two adaptations have been made on farms where conditions have been met, it will be easy to show any other farmer how the conditions on his farm also can be met. Dealers who have been selling farm lighting plants say that one of the most difficult things they have to contend with is the thought of the farmer that a lighting plant can't be adapted to his farm.

It is comparatively easy to convince the farmer of the advantages and comfort of electric light, but he hesitates to adopt it because he cannot figure out for himself how he is going to do it. *When the dealer himself lays out the plan and shows the farmer how easy it is in reality, THEN THE DIFFICULTY DISAPPEARS.*



# A Department of BETTER MECHANICS

No. 86

## Installation of Hot Tube in Chalmers 35-A and B Six-30 Cars

**T**HIS hot tube is an application of the "Hot Spot" used on the current Chalmers models, but so designed that it can be applied to the older Chalmers cars. It can be installed on the following cars:

Six-30, 5-pass. car, Nos. 55,700 to 75,699.

35-B, 7-pass. car, Nos. 75,700 to 82,001.

35-C, 5-pass. car, Nos. 90,000 to 94,000.

### Preparation for Installation

- 1—Drain the radiator.
- 2—Remove the radiator.
- 3—Remove the front floor boards.
- 4—Disconnect the accelerator rock shaft.
- 5—Remove the upper and lower toe boards.
- 6—Drill a  $\frac{1}{2}$ -in. hole in the center of intake gallery Welch plugs at front and rear of engine. This is shown at A in Fig. 1.
- 7—Install the intake gallery tube (J-2-921 in Fig. 4) through the intake gallery having the longest threaded end at the front of the engine.
- 8—Place the packing washers (J-2-922 in Fig. 4) on each end of the tube up against the Welch plugs.
- 9—Place the steel washers (X-16-700 in Fig. 4) up against the packing washers on each end of the tube.
- 10—Screw the outlet elbow (J-2-923 in

Fig. 4) on the tube at the rear end of the engine.

11—Screw the nut (X-13-840 in Fig. 4) on the front end of the tube.

12—Draw up on this nut to pull the tube forward, making tight connections at both front and rear Welch plugs. *Caution: Do not use too much pressure on this nut or the end of the intake gallery tube will break off.*

13—Screw the inlet elbow (J-2-923 in Fig. 4) on the front end of the tube.

14—If this elbow does not set up tight, place extra steel washers between the nut and the elbow to take up the clearance. *Do not drill the hole in the exhaust manifold until it is properly marked as described in operations Nos. 18 and 19.*

15—Install the inlet tube (J-2-921), making connection with the inlet elbow (J-2-923).

16—Install the exhaust manifold elbow

(H-4-268) on the other end of the inlet tube.

17—See that both union nuts (B and D in Fig. 2) are tight.

18—Push the exhaust manifold elbow (H-4-268) against the exhaust manifold.

19—Mark around the edge of the threaded end.

20—Drop the inlet tube and the exhaust manifold out of the way.

21—Drill a  $\frac{9}{16}$ -in. hole in the exhaust manifold in the center of the circle drawn in operation No. 19.

22—Tap this hole with a  $\frac{3}{8}$ -in. standard pipe tap. The hole should be opposite No. 2 exhaust. *In tapping the hole, do not run the tap in too far or the exhaust elbow will extend too far into the manifold, cutting off some of the hot gas.*

23—Disconnect the exhaust manifold elbow (C in Fig. 2) from the inlet tube.

24—Screw the elbow into the exhaust manifold. *Do not turn too tight or the end will break off in the manifold.*

25—See that the end of the elbow does not go past the inner wall of the exhaust manifold. If it does, cut off the end so that it will be flush.

26—Connect the inlet tube (J-2-919) to the exhaust manifold elbow.

27—Turn up the union nuts until they are tight.

28—Wrap the tube with asbestos rope packing (E in Fig. 3). Bind this on with

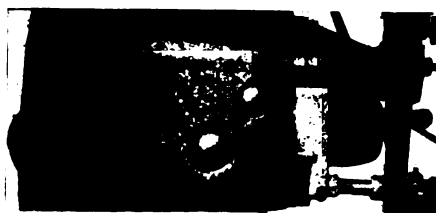


Fig. 1—Intake gallery with  $\frac{1}{2}$ -in. hole drilled in Welch plug

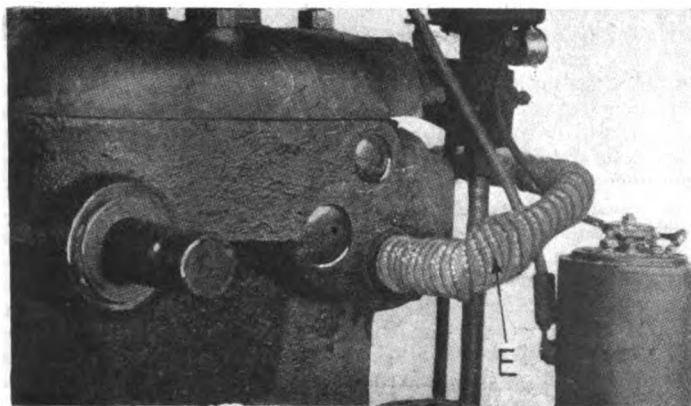


Fig. 3—Asbestos rope packing, shown at E

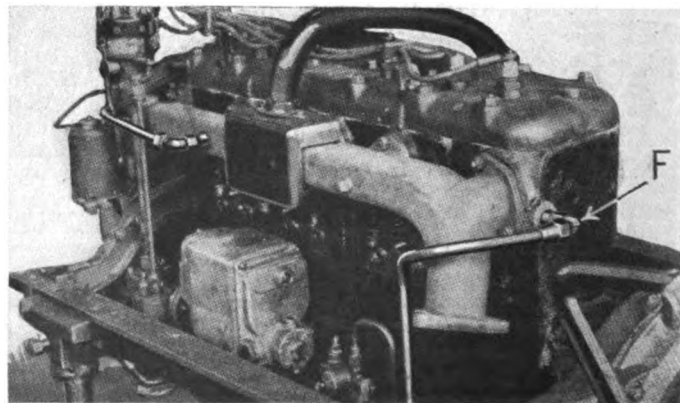


Fig. 5—The outlet tube on the outlet ell is shown at F

small wire. See that the tube is covered all over with this packing to hold the heat in the tube and prevent it from radiating into the air.

29—Install the outlet tube on the outlet elbow connection (F in Fig. 5).

30—Assemble this horizontally as shown. Be sure that the brake and clutch pedals clear the tube when they are depressed.

#### Don't Crimp the Tube

31—The lower end of the outlet pipe should extend through the dust pan and should be bent back slightly toward the rear of the car. Be careful not to crimp the tube.

32—Fasten this tube in position with a wire around the exhaust manifold or steering column to prevent it dropping down and interfering with the foot accelerator levers or brake and clutch pedals.

33—Move the left-side accelerator rock-shaft bracket to the right to clear the rear elbow connection. The rods connecting the rock-shaft levers with the oil regulator and carburetor will prevent it from working to the side.

34—Replace the floorboards.

35—Replace the radiator and make up the connections.

36—See that the butterfly choke valve in the carburetor closes fully when the choke-valve lever on the dash is in extreme rich position. If there is even 1/16 in. opening in the butterfly valve, the car will be hard to start.

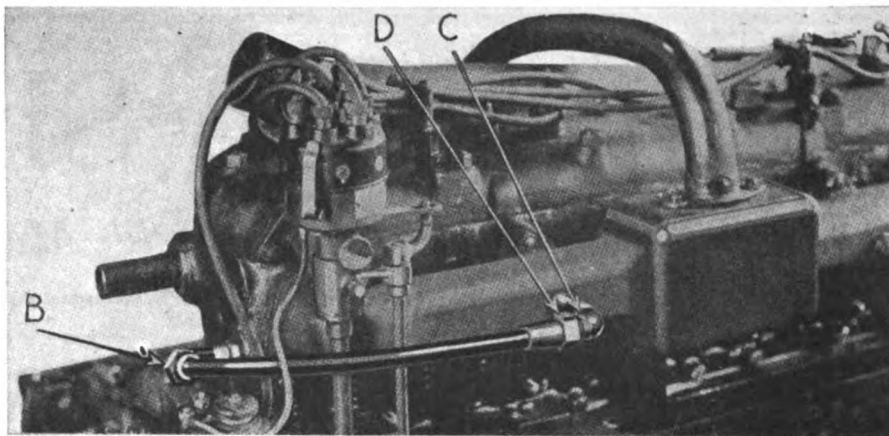


Fig. 2—B, C and D indicate the exhaust manifold elbow

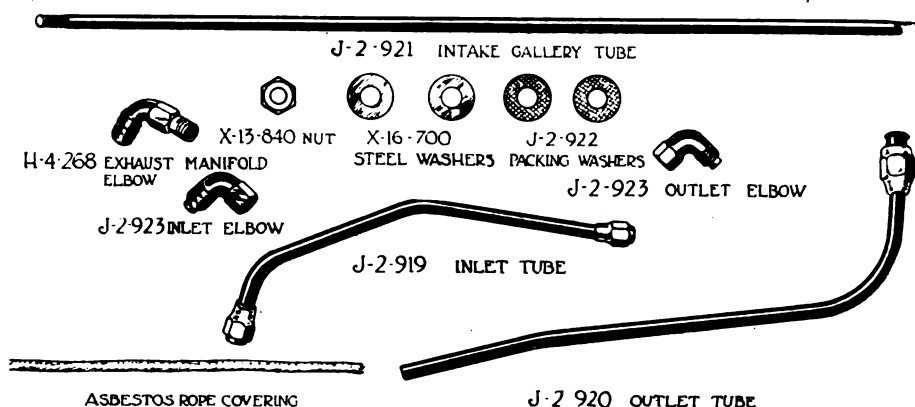


Fig. 4—These are all the parts used in installing the hot tube

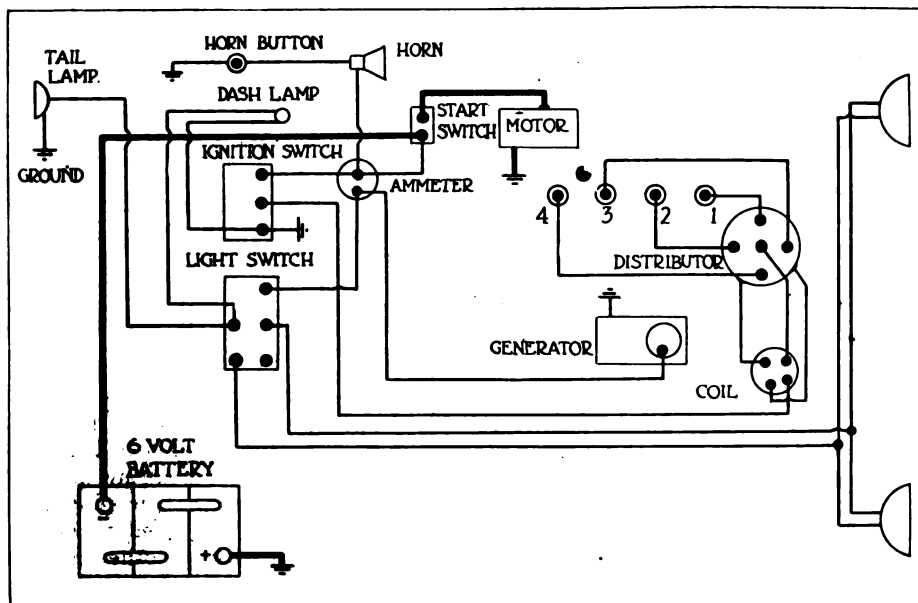
## Crow-Elkhart Wiring Diagram

Editor Motor World: Will you please furnish a wiring diagram for the Crow-Elkhart Model C-35? This car has the Dyneto single wire system.—P. F. Durfey, Spruce Production Division, U. S. Signal Corps, Laclede, Idaho.

We are glad to furnish you with the

wiring diagram for this car. You will note that the tail lamp and dash lamp are connected to the same switch so that turning on this switch lights both lights. The ammeter has the generator and battery connected to the same terminal on one side and the other side connects with

wires to ignition switch, lighting switch, horn and starting switch. None of the lamps are grounded for return with the exception of the tail lamp. All the others go through the switch before being grounded.—Editor.



Dyneto single-wire system used on the Crow-Elkhart Model C-35

#### Table of Fuse Sizes

THE Chicago Fuse Mfg. Co., Chicago, is issuing a wall card 11 x 14 in. which gives in tabular form the proper fuse and capacity for all makes of gasoline and electric cars, electric starting and lighting systems and motorcycles. The cards are printed on heavy, durable board, and will be sent free to dealers.

Let Your Money  
Do the Talking  
**LEND**  
It to Uncle Sam  
Buy War Savings Stamps

# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1564—ARMATURE-BEARING PULLER

An armature-bearing puller for the generator on Overlands is made of cold-rolled steel  $\frac{3}{8}$  x 1 x 4 in. The center hole is tapped out  $\frac{1}{2}$ -13. This forms the plate through which the set screw ( $\frac{1}{2}$ -13 x 5 in.) goes. The two pullers are of  $\frac{3}{8}$ -in. cold-rolled steel 6 in. long, flattened on one end and filed to fit around the armature shaft and bent to the proper angle. These are held in the plate with  $\frac{3}{8}$ -in. nuts.—F. C. Woodland, Norris City Garage, Norristown, Pa.

## No. 1565—REINFORCING A SMALL DRILL

A very small drill which is liable to break or bend when the pressure of the lever is put on can be reinforced by drilling a hole through a bit of wood with the drill in question and letting the wood take the side strain on the drill. The block should extend up to the chuck and leave only as much of the drill sticking out as the depth of the hole requires.—R. L. Henry, Rutledge, Tenn.

## No. 1566—TANK AND FAUCET FOR VERY HEAVY OIL

A tank for very heavy motorcycle oil is made from a 5-gal. can by unsoldering the ordinary faucet and soldering on instead a molasses faucet which works on the principle of a gate valve, and allows the oil to flow quickly. A thumb screw holds the slide to its seat, and when this is released it allows the slide to be opened with the lever.—R. D. Martin, Martin Automobile Co., Plainfield, N. J.

## No. 1567—AIR HOSE FOR TESTING TUBES

An air hose and connection are held in place on the bench with wooden battens, the connection being so that the opening is on top. The valve of the tube to be tested is then pushed down on the connection, the testing tank being on the bench. The air hose is not permanently fastened, so it can readily be used for other purposes.—David G. Gay, Gay Bros., Madison, Wis.

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

*1—Describe the shortcut briefly but clearly, in few words.*

*2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.*

*3—Write on ONE side of the paper only.*

*4—Sign your name and initials, the name of the company you are with, and the town.*

*Write plainly. If your name is unusual, print it in capital letters.*

as many of these coils as desired.—Kelsie Click, Click Supply Co., Berne, Ind.

## No. 1569—DOUBLE TEST POINTS

A double test point is more convenient for testing through armature commutator bars than two single points. The handle is made of fiber 1 x 6 in., and the points are made of  $\frac{1}{8}$ -in. copper wire  $8\frac{1}{2}$  in. long, going through holes drilled lengthwise in the handle,  $\frac{1}{2}$  in. apart. The distance between the points can be varied by bending.—A. L. Bennett, C. A. & M. Corp., Buffalo, N. Y.

## No. 1570—SELF-LOCKING COTTER PIN

This is a self-locking cotter pin especially for use in the Reo oil pump. A cotter pin is filed off on the sides of the shanks so that a catch is left on the ends. Before inserting the cotter, spring the legs out a little, and when the pin goes into the hole they will spring out and the catches will prevent the pin coming out.—Charles E. Bemis, Cartwright's Garage, Rocky Ford, Col.

## No. 1571—UNIVERSAL-JOINT CLAMP

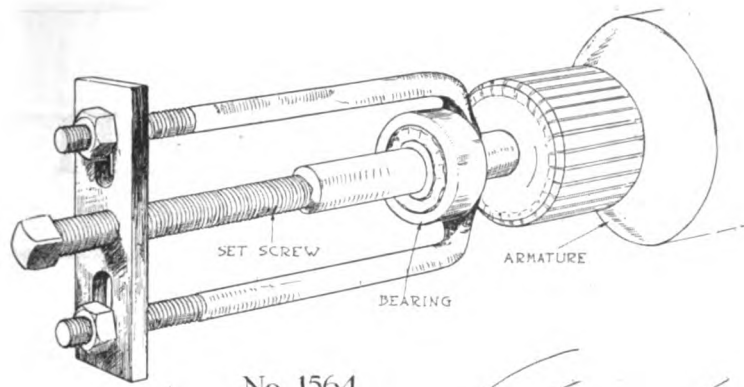
This is a clamp to take up lost motion and prevent rattle in a universal joint. The housing is slit with a hack saw and the clamp placed over the outside. When the bolts are drawn up the housing tightens on the shaft, taking up the slit in the housing.—W. G. Mason, Overland Garage Co., Moundsville, W. Va.

## No. 1568—BATTERY DISCHARGING BOARD

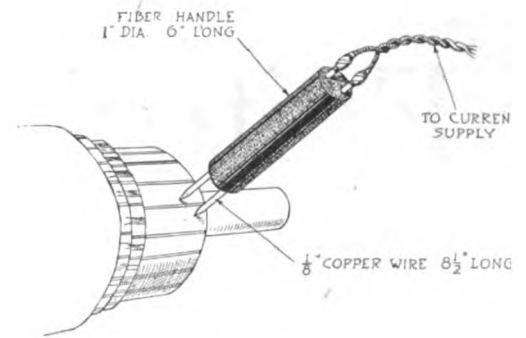
A board for discharging good cells down to the approximate voltage of the bad one to be repaired is made by connecting up resistance on a wooden board. The board is 16 x 14 in., and all the wiring is on the back. The positive wire of the battery is run through a coil taken from a Ford unit, then through a lamp socket with a 15-ampere fuse, then through the ammeter and then through the rheostat, which is made up of a number of coils taken from door bells. The rheostat cuts in

## No. 1572—PLUGGING A FORD GASOLINE TANK

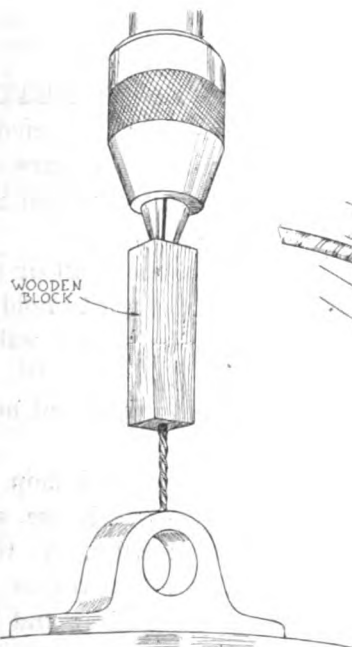
A  $\frac{1}{2}$ -in. spark plug is used to plug the hole of the Ford gasoline tank when it is desired to remove the sediment bulb without draining all the contents of the tank. The plug may be held ready in one hand while the bulb is removed with the other, so that little gasoline will be lost.—Fred J. Long, Griscom-Russell Co., Massillon, Ohio.



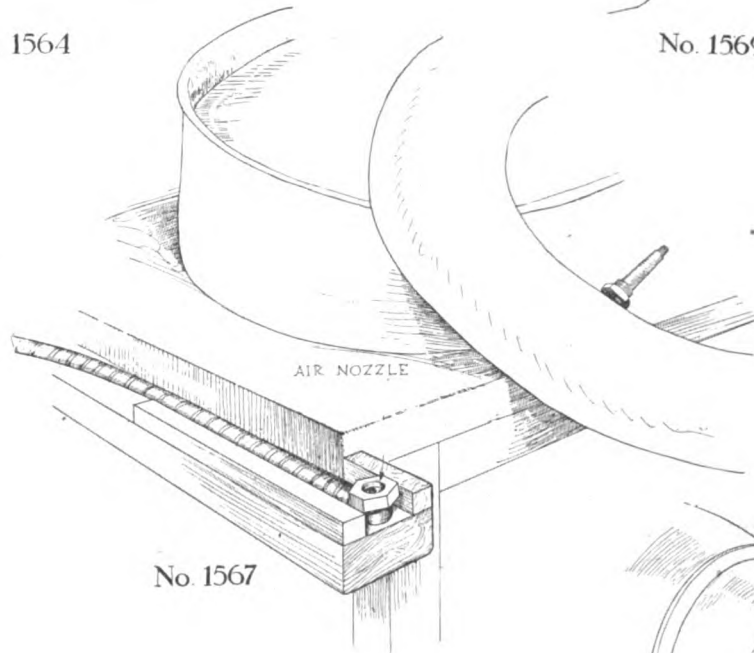
No. 1564



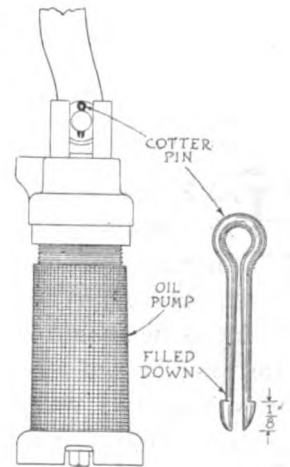
No. 1569



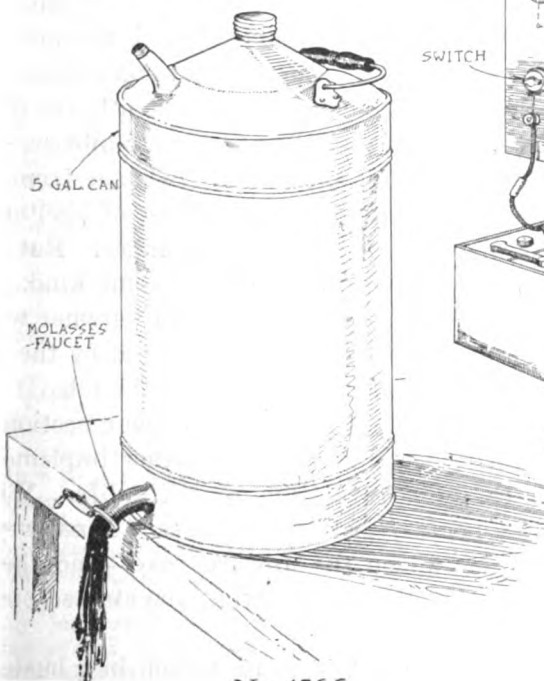
No. 1565



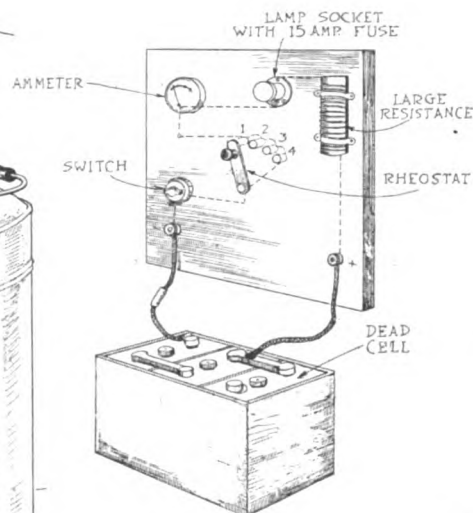
No. 1567



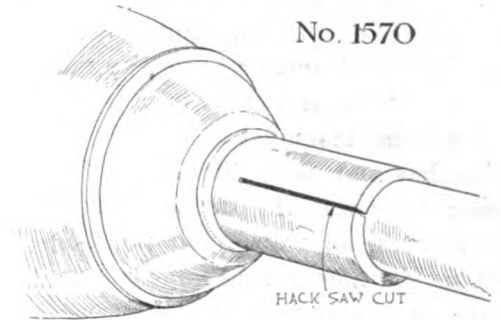
No. 1570



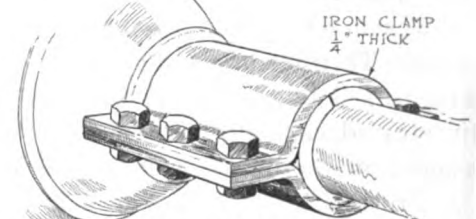
No. 1566



No. 1568



No. 1571



No. 1572

# Editorial Observation

## Teach the Farmer

**H**AVE you ever gone around the country and seen implements by the score going to pieces in fence corners?

Hasn't this impressed you that the farmer is not as efficient as he should be?

In these days of steel shortage has it ever occurred to you that this waste of steel, if retrieved, would run our industry for a long time?

The farmer has been left to work out his own salvation. No one has paid much attention to him. The time has come when he must be made more efficient, and one of the first steps is to teach him to take care of his farm machinery.

He has not been doing it. The old implement dealer, who was the farmer's point of contact with the mechanical world, did not help the farmer be better. He merely sold implements. The automotive dealer must step in here and become a seller, teacher, leader and friend.

1. Teach the farmer to care for his tractor, as a starter. Then his other implements—which YOU are going to sell him—will be cared for later. But get him started caring for some one thing. He has a garage now—and that generally is all.

2. Protection will make his tractor and other implements longer-lived.

3. An implement house will keep his investment from deteriorating.

4. It will cause the tractor to give greater satisfaction.

5. It will make the tractor look better—also the implements.

6. This will make YOUR implements better thought of and will help you sell MORE. Don't let your customers misuse the things you sell them.

7. This protection will lessen your service costs.

8. It will raise the standard of the farmer. It will make him more efficient. He will want other things you sell, such as farm light and accessories. You can

build him up to the point where he is a BETTER FARMER—and a better customer for the modern things you sell. He may buy trucks, new cars, implements and all sorts of things, all of which may start from a simple little shed for the tractor.

The simplest kind of shelter is a board affair that doesn't leak, tar-papered, just big enough to hold the tractor. It should have a floor so the tractor will be dry and up out of the mud.

The next step in a shelter is a real implement house for all the implements.

The next step is an implement house and shop.

The next step is a complete implement house, shop and power plant, containing the machinery, tools, electric plant, pumps and all similar apparatus.

Start the farmer with the simple shelter and lead him all the way down through to the point where he has a real power plant on his farm. The more machinery he has the better your business will be, and if you are the one who has consulted with and advised him you are the one he is more likely to patronize.

The shelter should be located conveniently for driving in and out, with good drainage possibilities.

The simplest form of shelter may be made from old boards around the farm. As the type of shelter is better it will be necessary to buy lumber. But get the farmer started with a shelter of some kind.

NOW is a good time to build it. The summer work is over, the tractor is likely to be injured by the fall weather and the farmer has time to do the job.

If you can get all the farmers in your section to begin sheltering their tractors and other implements you have begun a revolution in farm life. When one farmer begins, another imitates. Finally you will have them all on the upward road—and they'll never realize that that is just what you started out to do.

Aside from what it will mean to you in a business way it will be an interesting job. Try it.



## Letters from Readers

*THIS page is for the use of MOTOR WORLD readers with something to say. Letters on subjects of interest to dealers, garagemen, repairmen and jobbers are always welcome.—EDITOR.*

### Do You Sell Trailers?

Editor Motor World: Here is a bit of trailer news that will no doubt prove of interest to your readers.—Acme Motor Truck Co., Cadillac, Mich.

#### LUMBER HAULING HAS BEEN REVOLUTIONIZED BY TRUCKS

W. J. Scratchley, of the Heavy Hauling Co., Seattle, Wash., has prepared the following data on hauling, showing the increase in profits made possible by the trailer; also showing in a very interesting way how the motor truck has revolutionized hauling:

	Without Trailer	With Trailer
Distance, round trip, miles....	90	90
Distance with load, miles....	50	50
Number trips per week.....	5	5
Gasoline per trip, gallons....	12	15
Miles per gallon, gas.....	7½	6
Quarts oil per trip.....	4	5
Miles per quart oil.....	22½	18
Tons per load, trip.....	3½	6
Feet dry lumber per trip.....	4000	6500
Income per trip at \$4.50 per M ft.....	\$18.00	\$29.25

Figuring cost of gasoline at 22 cents a gallon and oil at 25 cents a quart, the cost of fuel per trip without trailer is \$3.64 and with trailer is \$4.55.

Deducting fuel costs, the profit per trip is \$14.36 without trailer and \$24.70 with trailer, or \$10.34 more with the trailer. These figures do not figure in the investment or depreciation of the trailer.

Mr. Scratchley uses an old 1½-ton Acme truck chassis with the steering gear converted for use as a trailer. The trip is between Monroe, Wash., and Seattle, and the reason for the longer return trip to Seattle is that a detour is necessary when coming back with the load. His income runs about \$250 more per month (above fuel costs) with the trailer than without it.

The distance is great enough to make it impossible for more than one trip per day either with or without the trailer, the trip taking about eight hours' running time for the ninety miles. The average number of trips per month is twenty-two.

### How Old Is a Mercer?

Editor Motor World: I have been a constant reader of your magazine, so naturally turn to your editors when in need of any motor information.

I wish to know how I can tell the difference between a 1914, a 1915, and a 1916 Mercer raceabout car.

Have bought one and want to know exactly just what model I have. Am writing you as there don't seem to be a dealer in this entire state who seems to be able to tell me.—G. A. Trudeau, New Orleans, La.

There should be no particular difficulty in distinguishing between 1914, 1915 and 1916 Mercer models as mentioned in your letter.

The 1914 Model was known as Series 35, and was equipped with a T-head motor, with cylinders 4½ x 5. It had a Rushmore lighting and starting system, and was equipped with a Bosch two-point ignition system.

In 1915, the Mercer company changed to an L-head motor, with cylinders 3¾ x 6¾. This was designated Series 22-70.

In 1916, the same motor was used, but the series number was changed to 22-72. These series numbers may be found on the name-plate of the car.

In case you find difficulty in distinguishing these models, we would suggest that you obtain the number of the chassis from the right side of the rear end of the frame and send it to the Mercer Automobile Co., Trenton, N. J.

### How Have You Done It?

Editor Motor World: We wish to correct an article appearing in your Sept. 18 issue of Motor World. That is Mr.

Haynes's report on the conservation program in the State of Montana, wherein you named several towns in Montana and stated that all dealers had signed the resolution. We are sorry to say that this is not the case in our own town, as we have three garages here which refuse to sign the resolution.

We would like to be able to say that every automobile dealer in the state and their allied industries had signed the resolution, but these three garages have been interviewed a number of different times, but for some reason or other are still holding out. However, we feel that our town should not have credit for 100 per cent efficiency until these three come in.

If you could give us any suggestions how we could put this proposition up to these three concerns whereby they might see it in a different light we would thank you very much for the information.—H. E. Williams, Administrator for Sweet Grass County, Big Timber, Mont.

### Successful Circular Letter

Editor Motor World: We are enclosing herewith a circular letter which we mailed out to the automobile owners in this vicinity which has indeed proven a very successful method of advertising. The way it was got up attracts the attention of the reader. If you think this will be worth anything to your readers you may pass it on to them.—Currie, Gaston & Bryarley, Tyler, Tex.

### Ford Tractors Sent in Carloads

DEARBORN, MICH., Oct. 17—Henry Ford & Son are now carrying out a uniform policy with all their distributors of sending them only carload lots of 300 tractors each. This permits a whole

### FOR USERS OF THE TEXAS STATE HIGHWAY

Your name.....  
Address.....

#### PLEASE FILL OUT THE FORM BELOW AND FOLLOW INSTRUCTIONS CLOSELY

- 1—Do you own an automobile or truck?.....
- 2—If so, state what make.....
- 3—Do you drive the vehicle yourself?.....
- 4—How long have you owned this car?.....
- 5—Are you getting the proper mileage to the gallon of gasoline?.....
- 6—Do you attend to the oiling of the car yourself?.....
- 7—Do you make your own adjustments?.....

In making your own adjustments you should be supplied with a complete set of Socket Wrenches, Open End Wrenches, a Six and Eight Inch Adjustable Wrench, a good pair of Pliers, Valve Grinding Compound, Battery Tester, a good Heavy Jack and a few other handy tools that don't come as regular equipment.

By giving your car a little personal attention you will find that it will give you much better service than it will if you neglect it. If, after giving it your personal attention, you find that it needs an expert mechanic, we have at your service one of the best in the country, to render efficient service to a limited number of customers at a reasonable charge.

He is especially good on ignition and starter troubles.

We have recently added to our business a complete stock of Fisk Tires and Tubes, and have the size that fits your car. We don't think you can get a tire that will give you more mileage per dollar invested. We have a stock of accessories that would supply the needs of any car owner.

We would be glad to be favored with a call from you at our elegant sales room, one block north on Broadway.

You are always welcome at our place. We are here to serve you.

Have your car washed at our Auto Laundry.

Yours for better service,  
CURRIE, GASTON & BRYARLEY.

Phone 180.

## *He's With Us Until—*

Editor MOTOR WORLD:

**P**LEASE discontinue mailing me MOTOR WORLD, as I have been inducted into military service at my own request and will entrain shortly for camp.

You will undoubtedly remember me as the man who gave you a story for your issue of August 1, 1917, on a clearing house at Butte, Mont. For the past year I have had charge of the used car department of the Pierce-Arrow Pacific Sales Co. of San Francisco, and when I return from Berlin I will go into the used car business again (because it is the best business there is when it is run as it should be run) and also subscribe for MOTOR WORLD again.

If when I get to camp I have some leisure moments I will write and tell you how the Pierce-Arrow Pacific Sales Co. of this city sold more than fifty used cars in 6 months, averaging \$2,000 each, at a ten per cent profit on each car.

Congratulations are due you because of the fact that your publications were responsible for a good many of the ideas that were put into execution and which resulted in such a successful business.

Please accept my sincere congratulations for the way in which you are helping to win the war.

I'll be with you till h—— freezes over.  
San Francisco.

JAMES A. P. HENDERSON.

trainload to go to one destination and eliminates railroad congestion somewhat. The tractors are unloaded at one point and distributed from there throughout the state.

### Regulate Gasoline Sales in Canada

OTTAWA, ONT., Oct. 18—Regulations have been approved by the Governor-General-in-Council controlling the wholesale and retail sales of gasoline in Canada. They provide for the licensing of all persons who deal in gasoline in Canada and certain fees are prescribed based on the volume of gasoline sold during the previous year. In cases where dealers fail to obey the provisions of the law, the Fuel Controller has absolute power to cancel or suspend licenses without notice. All persons who continue to deal in gasoline without making application for a permit to do so will be subject to a penalty of \$50 for each day such business is conducted in contravention of the regulations.

One important provision of the regulations is that, for the duration of the war, the sale of gasoline on Sundays is absolutely prohibited. Retail maximum prices are prescribed for the establishments selling gasoline in quantities over a thousand gallons a month. Profits are based on a 10 per cent advance over the wholesale cost delivered. These regulations mark the first step towards bringing the control of the sale of gasoline under the same sort of supervision as is now extended to the sale of coal and other fuels. Gasless Sundays will be continued in Canada for another two or three weeks.

### Curtail Electric Heaters

WASHINGTON, Oct. 17—The War Industries Board has ruled that the manufacture of certain electrical heating appliances, including carburetor heaters, hand wheel heaters, intake heaters, manifold heaters, primer heaters, cigar lighters and foot warmers must be discontinued after Dec. 27, 1918. Prior to that date manufacturers of such devices will be permitted to match up their stocks and to continue the manufacture of such products as are partly manufactured and to use up stocks of materials on hand. After Dec. 27, however, all manufacture must cease absolutely.

### Clear Roads for Truck Convoys

WASHINGTON, Oct. 18—The Highways Transport Committee, Council of National Defense, of which Roy D. Chapin is chairman, is preparing plans for the removal of snow from the motor convoy routes extending from the north and middle western states to the seaboard during the coming winter. The committee, which was effective in this work last winter, will use its complete organization, comprising the regional directors and the State Highways Transport Committees, in co-operation with the Motor Transport Corps under General C. B. Drake in this work. The state highway officials of Pennsylvania, New York, Ohio, Illinois, Indiana, Michigan, New Jersey, Massachusetts, Connecticut, Delaware and Maryland, which co-operated with the committee and the War Department most effectively last winter, will be called upon again to arrange

plans for the snow removal program which is now contemplated. The New York Legislature has provided Highways Commissioner Edward Duffy of that state with a fund of \$50,000 to be used in keeping the roads traveled by Government trucks clear of snow. Arrangements have been made with Professor Charles F. Marvin, Chief of the Weather Bureau, by the committee, to have forecasts made from different observation points in the territory to be covered by motor truck routes at least 3 days in advance of the starting of the trains. In this way it is expected that the organization will be able to anticipate coming snowfalls and guard against them.

### Des Moines Giving Mechanics

DES MOINES, Oct. 18—Charles G. Sheldon, of the War Department, has been at the Chamber of Commerce offices since Monday examining applicants for induction into the Motor Transport Corps.

The quota for the State of Iowa has been increased from 250 to 500 men. Those wanted are chauffeurs, both car and truck, general mechanics and repairmen, machinists, motorcycle repairmen, radiator repairmen, road testers, truck masters and oxy-acetylene welders. A limited number of ignition experts are also wanted. Men enlisting in this branch are promised almost immediate service overseas.

Members of the Motor Trades Bureau are furnishing their shop foremen and service managers to assist Sheldon in examination of the applicants.

# THE LAW

By George F. Kaiser

As It Applies to  
Dealers  
Repairmen  
Garagemen

## Judge Defends the Garage

The Court of Chancery of New Jersey has just handed down a very interesting opinion in a case where an injunction was sought against the building of a public garage on the ground that it was a nuisance.

The Court denied the injunction and decided that a garage constructed to hold 70 to 100 automobiles might be erected even though the deed of the property contained a covenant that:

No building or any part thereof erected upon said lot shall be used or occupied as a livery or sales stable, dye house, bone boiling or skin dressing establishment, soap, candle, glue, starch, lamp black, poudrette, or fish guano manufactory, slaughter house, piggery or tannery nor shall any building be used or occupied as a drug store without the written consent of the said party of the first part hereto.

The Court's opinion, which should be very valuable to any garageman located near recalcitrant neighbors, reads in part as follows:

The other grounds of complaint are that the noise and odor of a public garage will be a nuisance, that asphyxiating fumes from partially burnt gasoline will be dangerous to life and that gasoline in large quantities in the supply tanks and in the automobiles to be stored in the garage will be an ever present menace to life and property. These are all purely questions of fact. The burden of proof is upon the complainants and is all the more difficult to sustain because the dangers are merely apprehended. The proofs must establish clearly and satisfactorily that the business of a public garage in the immediate vicinity of the complainant's property is of such a character as to necessarily produce the mischief which the court is called upon to prevent.

The nuisance feature of noises and odors was not pressed in the argument. The danger to life from asphyxiating gases is negligible. In starting machines there sometimes occurs a backfire due to gross neglect in cleaning or to an excess of gas, in common parlance called too rich a mixture, which emits a fume said to be poisonous causing asphyxiation if inhaled in sufficient quantity.

That a fatality may happen under favorable circumstances is possible, but it seldom occurs and then only in closed quarters where the gas is generated and discharged.

Automobiles do not of course normally backfire at starting nor do all start out of a public place at the same time; but suppose that in the usual courses of daily trade the average mishaps in this respect take place, is it at all likely that the fumes would set up the grave danger the complainants apprehend?

Experience does not confirm it nor is it established by the proofs. Employers and

## The Purpose

of this department is to help our readers smooth out the legal kinks that now and then cause them confusion in their business. What legal knots are you trying to untangle? Mail them to us. We will be glad to help you. In sending queries be sure to include copies of contracts and notes to which you refer.—  
EDITOR.

others in and about garages suffer no serious inconvenience from the gas, although they come directly in contact with it, and far less is there possibility of harm to those in adjacent property. Moreover fumes that escape from the building are taken up by the air and neutralized so that there is little ground for alarm or fear that they will penetrate contiguous homes in such volume as to threaten health or life.

It remains to be considered whether the business is to be enjoined because of the danger of explosions. A public garage is not a nuisance *per se*, and the complainants do not contend that it is; they rest their right to relief expressly on the ground that the storage of large quantities of gasoline in tanks and in automobiles in the garage in close proximity to their hotels will subject them, their property and their guests to an extraordinary hazard to which they ought not to be obliged to submit. The question is whether with reasonable care a public garage can be conducted without calamity.

Twelve years ago the automobile was still in the formative and experimental stages and as much an object of curiosity as the aeroplane is to-day. Then there were but 13,000 in this State; now there are 137,000 and over 7,000,000 in the United States. Then in a day's trip of 50 miles the operator often spent more time on his back than he did at the wheel; chauffeur was a word of uncertain pronunciation; kerosene was used in the lamps; the self-starter, demountable rims, electric lights, the racer and the truck, the luxurious limousine and the practical Ford were either not conceived or in the birthing; and with all of these the development of the motor mechanism has kept stride until it has about reached the point of perfection.

Leakage of gasoline is the result of inexcusable carelessness or the purest accident. The accumulation of grease and dirt is due to the sheerest neglect. In these deplorable circumstances fire may occur from a short circuit of the electric appliance, but only when the insulation is worn off. Gasoline contained in the ordinary well constructed and well kept automobile is comparatively as free from danger of explosion as steam in

a boiler. Both can be properly guarded against by proper attention and reasonable care.

To require automobile tanks to be discharged before storing is impracticable and would close down the business. But if perchance an automobile should take fire in a garage followed by an explosion of the tank the danger would be local, confined to the machine or the immediate surroundings.

There is no evidence before me throwing light upon the force of an explosion of a 20-gallon tank, but my investigation satisfies me that it would not be so great as to do harm beyond the garage itself. And if this be so, and I have learned nothing to the contrary, the complainants are without footing.

It is said of gasoline that as an explosive the danger is 10 times greater than gunpowder. Yes, in the abstract, but not in the automobile. We recline unconcernedly in touring cars over a tank of gasoline, but it indeed be a reckless spirit who would ride over a can of gunpowder smoking.

Instances of explosives of automobile tanks while in garages are extremely rare and isolated. The infrequent explosions generally follow violent collisions. Destructive fires from that source are at least as uncommon as formerly were fires in livery stables. The housing of from 75 to 100 machines in a public garage would admittedly multiply the risk, but that would call for increased attention and care which it is not to be assumed would not be forthcoming.

Now as to the danger from the supply tanks: The prevailing practice of former days of filling automobiles was by decanting from open vessels. This method has been abandoned. The tanks sunk in the earth either under the pavement or immediately outside of the door are charged directly from the supply wagon and automobiles are filled on the outside of the garage by an automobile measuring pump through a hose. There is little or no escape of gas during either operation and the chance of fire coming in contact with the supply tank is remote.

In confirmation of the views I entertain that a public garage is not of and in itself a menace to contiguous life and property I need only point to the myriad in operation throughout the land, erected in densely populated communities amid and alongside hotels and hospitals, theaters and public buildings and without casualty more than usual in ordinary trade and enterprise.

In Vermont it was held in a recent case that a description in a mortgage: "One Ford touring car, Model T, Serial 621120, being the same automobile purchased of Wright & Co., November 2, 1915," was sufficient to charge the buyer from the mortgagor with notice, since the automobile could have been identified by reference to the recorded mortgage. —Wright vs. Lindsey, 104 Atl. (Vermont) 148.

# The RETAIL NEWS

## SOUTHWEST

F. L. Sweet & Co., Eagle Pass, Tex., have leased the Star Garage from Messrs. Boardman and will conduct a garage, service station and machine shop.

The Sory Motor Co., Livingston, Tex., has purchased the garage and automobile accessory shop of J. W. Leggett, Jr.

The Carlsbad Automobile Co., Carlsbad, N. Mex., has sold its business to the Southern Auto Co., and the two garages in Carlsbad will be consolidated. Earl B. Woodland, formerly manager of the Southern Auto Co., will be manager.

Leon Merritt, Chelsea, Okla., has bought the stock and equipment of the A-D Motor Co.

The Willard Service Station, Elk City, Okla., is now open for business.

Mitchell & Swaffer, Henryetta, Okla., have leased the room in the rear of the Henryetta State Bank, where they have begun business as a repair establishment.

B. C. Caddell, Mangum, Okla., recently bought the Oklahoma Garage and also that owned by F. P. Polaski, and is improving them.

The Broadway Garage & Sales Co., Oklahoma City, Okla., has leased the building at 711 North Broadway for its Columbia battery service station.

Joe Donahoe, Ponca City, Okla., has moved into his new garage on the corner of Grand and Fourth Streets.

Glenn Ages & Brother, Wagoner, Okla., have leased the Rice Garage.

Farris Young, Mansfield, Mo., is successor to S. J. Walker in the garage business.

Fred and Ed. Grebe, New Florence, Mo., are the new owners of the New Florence Garage, until recently owned by Grotwiel & Young.

W. C. Anderson, Liberal, Kan., has moved his Borderland Trail Garage from West Second Street to the first door south of the Enterprise Grocery.

Roy Harman, Macksville, Kan., has reopened his repairshop.

Charles Barr, Manhattan, Kan., has purchased the repair business from Herman Kastner at the Blue Valley Garage.

The Auto Electric Co., Bean & Murrill, proprietors, Manhattan, Kan., has opened a battery station at the Dewey Garage.

C. Hatch, Montezuma, Kan., has rented the garage of Eli Bargar.

Bert Ally, Neodesha, Kan., has opened the Ford Garage.

Noah Kornhaus, Newton, Kan., has sold his vulcanizing plant.

The Krug Motor Co., Washington, Kan., has purchased the Wilbrandt Garage. The Krug Co. now has garages and salesrooms in three counties—Marshall, Washington and Gage County, Neb.

W. E. Clayton, Altoona, Kan., has opened a Ford accessories shop.

E. E. Berg, Abilene, Kan., will move his business, the Abilene Battery Service Station, to the south half of the Cottage Hotel, which has been converted into a garage and service station.

E. N. Ward and Ed. Wilcox, Baxter Springs, Kan., have opened a battery service station on Twelfth Street.

T. B. Hubbard and E. B. Williamson, Beloit, Kan., have formed a partnership and will conduct a general electric business, known as the Hubbard Electric Co.

Harman Bros., Canton, Kan., have opened a garage and automobile salesroom.

The Cannon Ball Garage, Cunningham, Kan., Duncan & Jarnagin, proprietors, is successor to the Haydon Motor Co.

Leo Kern, Great Bend, Kan., has opened a repairshop for Ford cars. He also is in the garage business.

## New Garages

Smith Bros. Automobile Co. .... Mexico, Mo.  
S. D. Bray ..... Holland, Mo.  
A. Madison ..... Del Rio, Tex.

## MIDDLE WEST

The Stevens-Bulck Sales Co., Kalamazoo, Mich., is now located in its new quarters at 402-404 East South Street, moving there from Farmers Avenue. In addition to office and sales and display departments, there is a machine shop and garage space.

Maurice W. Fox & Co., Detroit, have moved into a new garage at 2865 East Grand Boulevard, where repairing, painting and sales of parts are being carried on. The company is continuing to use its former headquarters at 156 Milwaukee Avenue as a showroom for commercial cars.

The Packard Motor Car Co., Detroit, has enlarged its used car department at East Grand Boulevard and Belt Line. The extension includes a shop which will concentrate on rebuilding, repainting and repairing of used vehicles.

The Motor Car Sales Co., 525 Jefferson Street, Milwaukee, distributor of the Marmon in Wisconsin and Upper Michigan, has consolidated its salesrooms and service station with that of the Eckstein Automobile Co., 228 Wisconsin Street. A. F. Eckstein assumes the general management of both concerns. The action is taken to meet the newer conditions growing out of the war.

The Appleton Tire Shop, Appleton, Wis., has moved its store and shop to new and larger quarters at 732 College Avenue. A 150-ton press for truck tires has been installed. A. M. Scheuerle is manager.

The Upham-Schacht Co., Milwaukee, State distributor in Wisconsin of the Diamond-T, Traffic and Corliss trucks, has moved its headquarters and service station from 415-417 Marshall Street to 495 Broadway.

F. W. Moletir, Main and Johnson Streets, Fond du Lac, Wis., is disposing of his entire stock and grocery business in order to devote his entire time to the sale of Crow-Elkhart cars in Fond du Lac County.

The Stewart Products Service Station, Harry E. Weber, manager, Milwaukee, Wis., has moved from 172-174 Fifth Street to 582-584 Jefferson Street.

The South Side Vulcanizing Shop, Indiana Avenue, Sheboygan, Wis., has passed into the ownership of Frank J. Behrens, who purchased the interests of his brother, Joseph Behrens.

The Stanton Garage, Appleton, Wis., has made a large installation of tire retreading equipment and will make a specialty of tire repairs and general rubber work.

The Willard Service Station, Madison, Wis., R. T. Nichles, proprietor, has moved into the former garage and salesroom of the Welton Motor Car Co. at West Main and South Fairchild Streets.

Hansen & Robbins, Kenosha, Wis., Ford dealers in Kenosha County, have disposed of the business to A. H. Dahl, Westby, Wis., who recently acquired Ford dealerships in Westby, LaCrosse, Racine and several other Wisconsin cities. Mr. Dahl will take personal charge of the Kenosha business.

## New Garages

Wagner-Walter Auto Co. (30 x 100),  
Appleton, Wis.  
Clark Garage Co. (40 x 70),  
Footville, Rock County, Wis.  
Albert E. Briggs (30 x 90) .. Rhinelander, Wis.

## PACIFIC COAST

Zbinden-Wood Motor Co., Seattle, has taken over the distribution of Vim delivery cars in this territory.

Allen & Hebard Co., Portland, will distribute the Thermoid automobile tire in the Portland section.

Oregon Motor Car Co., Portland, has taken the agency for the Globe tire for Portland and Multnomah County.

E. V. Reeves, one of the proprietors of the Used Car Emporium, Seattle, has bought out the interest of his partner, W. F. Costello.

E. J. Jaeger Tire Co., Seattle, has opened a tire and accessory store at 719 East Pike Street.

## NEW TRUCK AND TRACTOR DEALERS

The Laser Motor Co., Little Rock, Ark., has secured the agency for the Cleveland tractor and will distribute within a radius of 25 counties.

Fred B. Johnston, Fort Smith, Ark., Federal truck distributor, has purchased most of the equipment of Williams & Mehmel, who are retiring from business, and will soon be equipped with a complete truck and repairing shop.

E. E. Roper and M. J. Allen, Wichita, Kan., will open a motor truck sales company in Wichita. The firm will be called Roper-Allen Motor Truck Sales Company.

The Jones-Opper Co. has made arrangements to distribute Cleveland tractors in Omaha, Neb., territory.

Smethurst Bros., Warren, Ind., have joined the ranks of automotive dealers. The Case tractor has been added to a line which already included motor cars, implements, hardware, stoves and buggies. An aggressive sales campaign on tractors is being planned.

E. V. Stratton Motors Co., Inc., Albany, N. Y., has taken on the Hi-Speed Trallercar, formerly the Northway Trallercar, a four-wheel, pneumatic tired 1400 lb. and 2000 lb. model, made by the Northway Trallercar Co., East Rochester, N. Y., and will distribute these trallercars in northeastern New York.

Bruening Bros., Apperson dealers and distributors, Kansas City, Mo., have taken the distribution in Missouri, Kansas and Oklahoma of the Plowman tractor. The firm has five salesmen on the road, building up a dealer organization. Dealers visiting Kansas City to get acquainted with the tractor are taken to a demonstration field near the city or to a farm several miles out, where a Plowman tractor is working.

Mitchell Motor & Service Co., Seattle, Wash., has been appointed distributor for the Peerless truck line in western Washington.

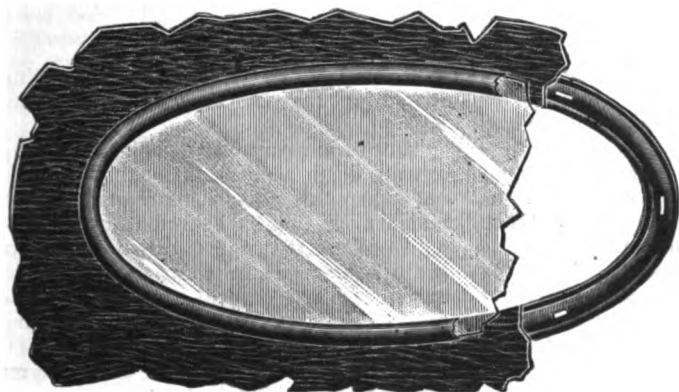
R. P. LeFeber, Tacoma, Wash., will hereafter distribute Denby trucks in Tacoma and southwest Washington territory.

Cliff McCready, owner of the O. K. Garage at Arcata, Cal., has added a tractor department and opened Cleveland tractor salesrooms.

# Automotive Equipment

## IDEAL CURTAIN LIGHTS

These are curtain lights with an inside and outside metal frame, the inside frame having a series of slots and the outside frame having a corresponding series of tongues which go through the slots and clinch over. The light and the curtain are clamped between the two. Furnished in celluloid, plain glass and bevel glass with either



japanned or nickel frames. Prices \$5 to \$45 per dozen.—Metal Stamping Co., Long Island City, N. Y.

## BUCKEYE TOWING CABLE

This is a wire-rope towing cable with a double hook on one end and a rope sling on the other. The cable is wound on a twisted-wire reel for convenience. Price \$6.—Bellevue Mfg. Co., Bellevue, Ohio.



## MONOGRAM LUBRICANTS

A line of oils and greases scientifically prepared for cars, trucks and tractors. Put up in steel drums or in neat containers. Non-liquid oil is also furnished.—New York Lubricating Oil Co., 116 Broad Street, New York.

## RAYBESTOS MOLDED CLUTCH FACING

Raybestos Molded Clutch Facing is the new product which will entirely replace Raybestos woven clutch facing after the completion of orders now on hand. The name will be stamped on the same as on the previous facing and the price will be no higher.—Raybestos Co., Bridgeport, Conn.

## SE-MENT-OL RADIATOR CEMENT

A radiator cement put up in both liquid and powder forms to be introduced into the cooling system through the radiator filler when the water is hot. On exposure to the air through the leak it solidifies, and the remainder is drawn from the radiator. A 7-oz. can of the powder will repair a 12-gal. radiator. Price 75 cents. An 11-oz. can of the liquid will repair a 6-gal. radiator. Price 75 cents.—Northwestern Chemical Co., Marietta, Ohio.

## ALBANY LUBRICATING PRODUCTS

A line of products including Albany grease for cup use, Cook's lubricant for transmissions and Albany automobile oil. The latter is made in light, medium and heavy grades for different lubrication problems.—Albany Lubricating Co., 708-710 Washington Street, New York.

## AKRON VULCANIZING EQUIPMENT

This equipment includes five models of one, two and three-cavity outfits and a retread mold. Type A is a three-cavity outfit with self-contained steam boiler, 8 x 20-in. tube plate, three adjustable clamps and

head molds. Takes all sizes from 2½ to 5-in. tires.

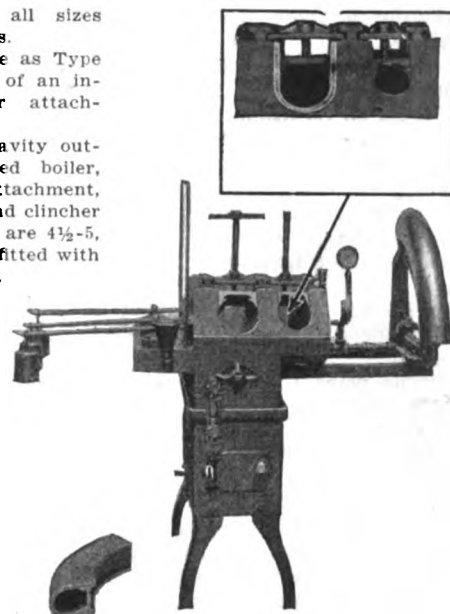
Type B is the same as Type A, with the addition of an inside-patch vulcanizer attachment.

Type F is a two-cavity outfit with self-contained boiler, tube plate, patch attachment, straight-side, Q. D. and clincher bead molds. Cavities are 4½-5, 3¼-4, the latter being fitted with a reducing shell 2¼-3.

Type C is a three-single-cavity outfit piped for separate boiler. Takes casings 2½ to 5 in.

Type G is a five-single-cavity outfit for separate steam boiler and takes casings 2½ to 6 in.

Type E is a retread mold for tires 2½ to 5 in. Has two cavities and a reducing shell.—Akron Rubber Mold & Machine Co., Akron, Ohio.



## KESTER ACID-CORE SOLDER

This is a self-fluxing wire solder. It is a hollow wire filled with an acid soldering flux contained in the cells of the hollow. As the cells are separated from each other, the acid does not flow from one to the other, but is released as the wire is melted. The wire is ¼ in. in diameter. Sold in 1-lb. coils in cartons, ½, 5 and 10-lb. spools.—Chicago Solder Co., 218 North Union Avenue, Chicago.



## BUCK'S SUPPORTING JACK

This is a supporting jack to be placed under the axles of the car to keep the tires off the ground. The standards are made of hardwood and the connecting link and the feet are made of pressed steel. They can be folded and nested together in sets of four. Weight 12 lb. per set. Price \$3 per set.—Monroe Buck, Glens Falls, N. Y.

## EN-AR-CO PETROLEUM PRODUCTS

These include White Rose gasoline, En-ar-co oil and grease and National light oil for tractors using oil-operated engines.—The National Refining Co., Cleveland.

## OILDAG

Oildag is an automobile lubricant described as being deflocculated Acheson graphite which comes in two different forms. One of these consists of concentrated deflocculated graphite to be blended by the consumer with the regular grades of oil, and the other is a ready-to-use grade in which the blending has been already done.—Acheson Oildag Co., Port Huron, Mich.



## BLAXSHINE

This is a hard-drying enamel which is easily applied to car bodies. It has a glossy, flexible finish and it is stated that it will neither crack nor chip, will resist extremes of temperature and helps to preserve the body to which it is applied.—Twin City Varnish Co., 208 N. Wabash Avenue, Chicago.



## Two Thoughts

(Continued from page 17)

sider was a heavy drag in bad roads for more than half of the year for about three of our heaviest trucks. I knew absolutely that the truck he was considering would not begin to give him service. I talked with him for an hour. When I was leaving he said:

"I am sorry that you came in here."

"I should think you would be glad," I answered, "for, whatever truck you may buy, you will know better about your proposition and will come nearer meeting it than you would have done before."

"But before you came," he said, "I considered this question all settled and now it is all on its head."

"Eventually that man did the right thing by his business and settled the transportation in the right way. But he honestly had the wrong idea. Such a mistake in a motor car would have caused only a little inconvenience or perhaps some discomfort if the car was overloaded, but he was about to make a business mistake in a very serious matter."

"The point I wish to make is merely as to the different viewpoint the dealer must face."

Right here the matter of the display truck came into the question. Bailey explained that in this way:

"We are selling a machine that depends upon its various parts for its ability to deliver the sort of service it is sold for. We believe that the more we show these parts, the more the intelligent buyer will believe that we mean what we say. Consequently we want to show the excellence of our machinery and parts at all times. It is good advertising for a good machine."

Just then R. A. Howard, one of the higher-ups of the International Mack, came in, having just arrived for a visit at the branch, and the proposition was explained to him and he entered earnestly into the discussion:

"Under the rapidly changing condi-

## Who Said Farmers Won't Buy Sedans?



The photograph shows two Ford sedans sold to neighboring farmers by the Rude Auto Co. of Perry, Iowa. Both sedans were sold on the same day. The Rude company has five Ford service stations, and its salesman, Mr. Hauptert has sold more Ford sedans than any other Ford salesman in Iowa

tions of the truck business at present," he said, "I would advise a motor dealer who is thinking of selling trucks to sell tractors."

"Of course I am a truck man but I am a bug on tractors. With the non-essential sales wiped out of the truck business, I am not sure that there is going to be a very wide field. In my opinion the non-essential ban shuts out most of the light truck prospects. Certainly it wipes out a great many of those sales that were open to the new dealer, and especially the motor car dealer."

"Now, according to my figures, there are 30,000 prospects for tractor sales in the State of Missouri. That is enough to keep all of the motor car dealers alive for the next few months, and they should get busy and sell them."

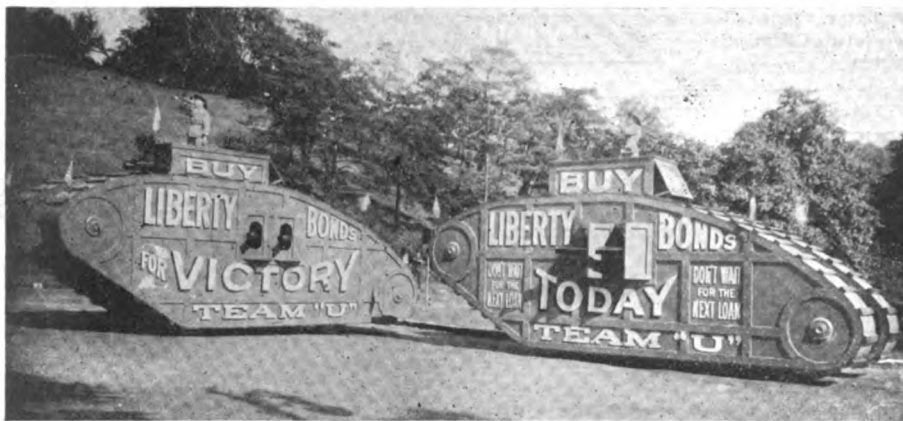
"I think the tractor is a better thing for the motor car dealer to sell than the truck. He can grasp the idea better. He sees the points and can make

the prospect see them. He is selling something that is concrete and appealing."

"Our company has seldom found agents good representatives. They do not grasp the big idea of transportation and service that is behind it."

"I believe that the future is going to see a better tractor than now is made, but there are several tractors on the market that are doing good service and will help the farmer in his present shortage of labor. It certainly looks to me like the right thing to get into now, and I believe that if many of the present motor car men go into that line they will stay in it."

"The truck business is and has been more or less uncertain. There are many failures because so many persons do not grasp the idea that must go with it in making sales. I think any person who goes into it as a makeshift or a help is making a mistake."



THESE TANKS ARE BUILT UPON BUICK 1918 CHASSIS and helped put the Liberty Loan over in Cincinnati. They were made by the Leyman-Buick Co. H. S. Leyman, president of the company, is captain of Team U, which carried off honors in the drive. Boy Scout buglers rode on the tanks and bugled continuously. In the third loan the Leyman-Buick Co. plastered the front of its building with a big loan sign. The freedom of the city was granted to these tanks and they were loaned to other teams

## Future Tractor Dealer Must Be "Alive"

### So Say Implement Makers—And Mount Tells How the Tractor Will Half Win the War

CHICAGO, Oct. 18—To retain his position in the implement trade and attain anything like the dominancy in the tractor and power farming equipment trade the old-time retail implement dealer will have to adopt the aggressive methods of the motor car dealer:

- 1—Put the tractor on his floor;
- 2—Demonstrate it;
- 3—Sell it for cash, and
- 4—Stand ready to take care of his customer in service and repairs.

This was the consensus of the twenty-fifth annual convention of the National Implement and Vehicle Association, as far as it concerned the automotive industry, which closed here to-day after a three-day meeting.

The retail implement dealer realizes that he will have to meet the motor car dealer on the field of salesmanship if he is to remain in business. He came to Chicago last week to meet with the sales managers' division of the N. I. & V. A., and the sales managers told him so—told him, in the words of R. B. Laurie, sales manager of the John Deere Plow Co., Moline, Ill., that to escape extinction it is necessary and vital for him to add tractors and power farm equipment to his line of horse-drawn equipment.

W. L. Derry, president of the National Federation of Retail Implement Dealers' Associations, speaking for himself and other retail implement dealers, assured the tractor and power farming equipment makers at the meeting that the old-time implement dealer was going to sell the tractor and power farming machinery, that the tractor maker and the power farming equipment maker wanted the retail implement dealer to sell their goods, and that the old-time dealers stood ready with a line of repairs to do the business.

But, reporting on the joint conference between the retail dealers and the sales managers last week, which was reported in Motor World for Oct. 17, A. T. Jackson, president of the sales managers' division, while recognizing the claim of the implement dealer to priority in the field and admitting that he seemed the most logical salesman for the tractor and its attendant equipment, gave it as his personal opinion that no matter who applied them it would be the aggressive merchandising methods of the motor car dealer that would determine the supremacy of one or the other class of dealers in the field, that is, it would be necessary for the implement dealer to adopt the merchandising methods of the motor car dealer.

The subject of discounts and C.O.D. conditions, pertaining principally to tractor repairs, came up again, as it did last week in the meeting. That the motor car dealer would not be content to trade

on the more or less common discount of 10 per cent now allowed by many of the tractor and power equipment makers was accepted as true without argument. That the retail implement dealer must adopt the same tactics was argued.

As to C.O.D. repairs, while it was admitted that this was customary in the motor car trade and the motor car dealer taking on the tractor might be satisfied with such a method, the old-time retail implement dealer never would be and the tractor maker would have to do something to meet the situation there, if, as many of the makers now claim, they prefer that the old-time dealer handle the tractor and power farming equipment.

F. P. Mount, president of the Advance-Rumely Co., LaPorte, Ind., read a paper on the "Development of Power Farming and What It Means in Helping Win the War." The need of the tractor was the main theme of his talk. Labor has become so scarce, wages so high and horse power so weakened, while at the same time the demand for increased food production has grown so, the use of as many tractors as we can get in the field is obligatory, according to Mount, "till we drive the Hun beyond the Rhine and truly beat our swords into plow shares and our cannon into tractors."

### More Boston Grippe Victims

BOSTON, Oct. 19—The Spanish influenza continued to take its toll among the motor trade again the past week. Frederick S. Randall, who, with his father, was one of the leaders some years ago handling the Stevens-Duryea car, was stricken and died in a few days. Charles Greenwood, one of the leading salesmen with the Buick Boston Co., also died. James S. Mahoney, who had been identified with the big accessory house of John & Arthur, was also a victim. A number of the men in the service stations also died. The motor plants were much crippled, but they have begun to get back into their stride again, as the epidemic has waned.

### Increased Coal Storage Authorized

WASHINGTON, Oct. 18—The United States Fuel Administration has authorized slightly increased coal storage for all classes of consumers except those in Class 1. Consumers not on the preference list are authorized to lay in additional reserve supplies and consumers in Class 2 may store coal up to the limits now imposed on Class 1. Consumers in Classes 3 and 4 have both been moved up one class.

### Wolverine Tractor Elects Directors

SAGINAW, Oct. 19—The Wolverine Tractor Co. has elected the following board of directors: W. J. Wickes, Arnold Boutel and W. E. Laur of Saginaw; C. A. Bigelow of Bay City; W. E. Wood, W. G. Wagenhals and W. F. Austin of Detroit. The company has been capitalized for \$300,000, of which \$175,000 has been subscribed.

## Return Load Bureaus Catching on Rapidly

### Colorado, Utah, Wyoming Organized—New England Already Operating Effectively

WASHINGTON, Oct. 18—The plans laid a year ago by the Highways Transport Committee, Council of National Defense, are rapidly developing and displaying their worth. Reports received from various sections of the country show an increasing and constant motor truck haulage business. Tom Botterill, chairman of Region No. 9, including Colorado, Utah, Wyoming and New Mexico, has just completed his organizations in each state, and has informed the Highways Transport Committee that the Mormon Church has endorsed his activities and will aid the rural express to the fullest extent.

An interesting report from the East has also been received, coming from the Return Loads Bureau of the Rhode Island Highways Transport Committee, and reporting:

### What Rhode Island Did

"Our Return Loads Bureaus at the State House and Providence Chamber of Commerce are now kept exceedingly busy arranging for loads in both directions over the highways. As many as 50 calls a day indicate the large amount of business which is coming through these offices. The tonnage that we know definitely has been arranged for by these offices includes:

	lbs.
Business one way.....	294,400
Business two way.....	8,300
Arranged for monthly (one and two way) .....	382,500
Total.....	685,200

This does not include much tonnage that the Bureau has brought about by its advertising and of which it never learns definitely. Truck lines, the report adds, have been established for daily operation as follows:

Providence to Woonsocket.  
Providence to Fall River.  
Providence to New Bedford.  
Providence to Boston.  
Providence to Taunton.  
Providence to Waterbury.  
Two lines, just starting:  
Providence to Hartford, 3 times per week.  
Providence to Springfield, 3 times per week.

### Central Station for Small Businesses

The Rhode Island Committee is also perfecting a reorganization contemplating a central station for small business, giving attention to the coming problem of snow removal, and going into the matter of the overloading of trucks which causes unnecessary road damage. In addition, the committee has brought about an agreement of Newport merchants to restrictions of retail delivery.

Similarly, reports are coming in, states the Highways Transport Committee here, from all of the 11 Regional Chairmen showing continued activity and promotion of the Return Loads Bureaus, Store-Door-Delivery, and general co-operation with the Railroad Administration, etc., all tending to the successful prosecution of the war.

# Tractor Makers Up in Arms Over Curtailment Order

*Thirty Band Together to Put Their Case Before War Industries Board—See Their Business Jeopardized*

CHICAGO, Oct. 22—Protesting that the recent ruling of the War Industries Board, curtailing the supply of iron and steel for tractor production in 1919 by 25 per cent, will practically put them out of business, thirty manufacturers of tractors and parts have formed an organization which will be known as the American Tractor Association. The avowed purpose of the new organization is to carry the case of the protesting manufacturers to Washington with the hope of securing a modification of the curtailment order.

The membership of the American Tractor Association is composed for the most part of tractor manufacturers who have been developing new designs during the last year or so and who had reached the point where a considerable production seemed possible next year. By the ruling of the Priorities Division of the War Industries Board these concerns see their hopes frustrated. Among the members also are other tractor manufacturers who have been producing tractors in considerable quantities, but whose future activity would be severely crippled if the ruling stands. In addition are a number of manufacturers of parts who have contracts with the smaller tractor concerns but who will not be able to deliver the parts ordered if the tractor manufacturers are prevented from developing their plans.

## Few Members at Hearing

The ruling of the War Industries Board followed a conference between the Priorities Division of the Board and the Farm Implements Committee of the National Implement and Vehicle Association on Sept. 17. Of the members of the new tractor association none, or at least very few, knew in advance that such a conference was to be held, certainly none expected the curtailment until after the whole tractor industry had been heard. Even tractor manufacturers who are not members of the new association, yet who have built thousands of tractors, did not even know that such a meeting was taking place, and had no voice whatever in the curtailment order. There were scores of smaller tractor concerns that have been in the development process for a year or so and were not notified of the meeting and did not directly or indirectly have a chance to protest or express their views on this subject. The whole matter was handled by the War Service Committee, which, before taking the subject up, did not call a meeting

of all tractor manufacturers to discuss the subject. It was a plain case of extinction for practically all of these newcomers, who had not got far into production, without an opportunity of even voicing a protest.

The 25 per cent curtailment order has not only jeopardized the future of these concerns, but its influence has extended to the manufacturers of parts, such as engines, gearsets, ignition, lubrication and all other parts essential for the tractor. It is, therefore, not surprising that all of these parts makers, or a great many of them, have united with the new American Tractor Association and are ready to take up the case with the War Industries Board. These parts manufacturers have large contracts for future delivery with many of these smaller tractor concerns. The great tractor demand of the present year has resulted in programs for factory enlargements, and to meet these increases in production these parts makers have become part and parcel of these newer firms in the tractor field.

## Organization Includes Tractor Pioneers

The list of thirty charter members in the American Tractor Association contains the names of manufacturers of standing, who have been manufacturing tractors for several years. The list also contains the names of parts makers of standing, so that the new organization does not represent a group of mushroom concerns that have sprung up during the past year, but rather firms that have been doing development work for several years and parts makers of long and established standing in the tractor industry. Included are manufacturers of electric apparatus, gearsets, carbureters and radiators who have established businesses, and some of them have been pioneers in the tractor industry.

The formation of the American Tractor Association comes as the result of a settled conviction in the minds of the smaller tractor manufacturers and parts makers that the War Industries Board has been influenced by the membership of the Tractor Division of the Farm Implements Committee of the National Implement and Vehicle Association, which counts in its membership the large and powerful manufacturers of tractors and farm implements and to whose advantage it would be to choke off considerable new development in tractor manufacture. Such has not been publicly stated by the new organization, but this is the senti-

ment of many comprising it, and it is without doubt the leading spur to organization.

Immediately the ruling of the Priorities Division of the War Industries Board with its 25 per cent restriction on the amount of iron and steel for 1919 was announced by the Farm Implements Committee, the smaller tractor manufacturers and makers of parts sensed disaster to their growing business and at once began to agitate for a modification of the ruling. Believing that they had not been adequately represented at the Washington hearing before the War Industries Board, which resulted in the ruling, and realizing that without organization any protest they might make would be ineffective, the necessary measures to bring about the American Tractor Association were taken.

As a result at the formation meeting held in Chicago last week a representative committee was appointed to go to Washington and present the case of the tractor and parts manufacturers in order to secure rescinding or modification of the ruling. This committee will demand of the War Industries Board that the weaker interests of the tractor industry be given representation in order that the needs of an essential and growing industry shall receive proper recognition.

## Significance of the Ruling

It is hinted by many of these newer tractor manufacturers that there is a very large representation of the old-time tractor interests on the War Industries Board and connected with this organization, and that the ruling savors very strongly of being a protection measure to these old-line concerns, which have resented very much in the last 2 years the entrance of new blood into the tractor field and have also strongly resented the entry of the automobile manufacturer, as well as the influence of automobile design on tractor engineering.

The opposition of many of the old-line tractor makers to the Fordson tractor has been very generally construed as not so much an attack against Henry Ford as rather a defensive act of these tractor manufacturers against the invasion of the old tractor circle of makers by the modern automobile and truck industry. It has been rather generously stated by a few of the leading old-time tractor manufacturers that Henry Ford beat them to it in the Fordson tractor, and that if they had thought of it in time

they would have done the same thing, but they did not. The opposition to the Fordson started in England as soon as the Government placed tractor contracts. The scene of attack next shifted to Canada and finally to the United States, where it has continued pretty generally ever since. Fortunately there are some of the older interests and also the stronger interests among the old tractor manufacturers who have publicly stated that they will welcome everything that is good in tractor design, no matter whether it comes from the ranks of automobile manufacturers or tractor concerns. They state unequivocally that in these war days the best that comes out must be welcomed, and that there must not be opposition to development of design and increase in tractor efficiency.

Charter members of the American Tractor Association to the number of thirty signed the following pledge:

*We, the undersigned, tractor manufacturers and parts makers, and trade press, do subscribe as charter members to a national organization to be known as the American Tractor Association, with central office in Chicago, Ill., and pledge ourselves to the payment of the first annual dues of \$50.*

Erd Motor Co.

Square Turn Tractor Co.

Bullock Tractor Co.

Reed Tractor Co.

The Star Tractor Co.

The Evans Mfg. Co.

Zelle Tractor Co.

Powell Tractor Co.

Sumpter Div. Splittorf Electrical Co.

Climax Engineering Co.

Kohl Tractor Co.

U. S. Tractor & Machinery Co.

Parrett Tractor Co.

Belt-Rail Tractor Co.

Foote Bros. Gear & Machine Co.

Wisconsin Farm Tractor Co.

Kokomo Electric Co.

Perfex Radiator Co.

Brewer Mosel Automobile Co.

Nilson Tractor Co.

Wilcox-Bennett Carburetor Co.

Agrimotor.

The John Lauson Mfg. Co.

Illinois Tractor Co.

H. C. Doman Co.

Turner Mfg. Co.

•Aulson Tractor Co.

Geo. D. Bailey Co.

Interstate Tractor Co.

Hooven Radiator Co.

Officers, members of executive committee and committee chairmen of the American Tractor Association were elected as follows:

President, B. F. Sprankle, general manager Illinois Tractor Co., Bloomington, Ill.

First vice-president, W. N. Smith, president Monarch Tractor Co., Watertown, Wis.

Second vice-president, A. C. Bennett, Wilcox-Bennett Carburetor Co., Minneapolis, Minn.

Treasurer, John B. Foote, president Foote Bros. Gear & Machine Co., Chicago, Ill.

Secretary, Henry Farrington, Agrimotor, Chicago, Ill.

## General Motors Trade to Get "Frigerators"

### Car Dealers to Sell Small Refrigerating Plants—Margin of Profit Good

DETROIT, Oct. 18—W. C. Durant has bought the equipment and the rights of the Guardian Frigerator Co., Detroit, thereby bringing the General Motors Co. into the ranks of general utilities manufacturers. The entire Plant 5 of the Cadillac Motor Car Co. will be utilized in the manufacture of frigerators. The new company will be styled The Frigidaire Co. The frigerator is a large insulated box in which food is kept at a low temperature controlled by means of an electric motor.

The product will be marketed through the General Motors dealers and distributors, thus filling in for them to a large degree the gap which has been caused by the reduction of passenger car production.

The frigerators will be sold to the dealers on the same basis as cars with a slightly better percentage of profit offered them on sales to consumers. There are two models—one sells for \$350, the other for \$365—and the profit averages 25 per cent. The machines will take up very little space in a dealer's showroom and no accessories need be carried in connection with the proposition.

Within 30 days it is planned to have agencies established in Washington, Atlanta, Buffalo, New York, Pittsburgh, Philadelphia, Cincinnati and Dayton. Before Jan. 1, 1919, every General Motors agency will represent this company.

#### Members of Executive Committee

C. B. Stebbins, president and general manager Climax Engineering Co., Clinton, Iowa.

J. R. Manning, secretary Coleman Tractor Co., Kansas City, Mo.

Edward Kohl, president Kohl Tractor Co., Cleveland, Ohio.

J. C. Westmont, president Wisconsin Farm Tractor Co., Sauk City, Wis.

Leonard Nilson, engineer Nilson Tractor Co., Minneapolis, Minn.

R. F. Florian, treasurer Square Turn Tractor Co., Norfolk, Neb.

Claire L. Barnes, vice-president and general manager Parrett Tractor Co., Chicago, Ill.

#### Chairmen of Committees

**Membership Committee**—W. A. Carroll, vice-president Erd Motor Co., Saginaw, Mich.

**Constitution and By-Laws Committee**—L. M. Turner, vice-president and general manager Turner Mfg. Co., Port Washington, Wis.

**Investigation and Statistics Committee; Publicity Committee**—Henry Farrington, Agrimotor, Chicago, Ill.

The members of the membership committee will remain in Chicago for the remainder of the week making plans for

an aggressive campaign. Already assurances have been received from a number of tractor and parts manufacturers who were not represented at the meeting that it is their intention to join. It is hoped to have the membership pass the hundred mark within 30 days.

Another meeting of the association will be called by the executive committee in the near future.

By the 25 per cent curtailment for 1919 many of the old established tractor makers have practically admitted that they will not to any extent be interfered with in 1919 production because the ruling permits them to make use of the inventory which they have had on hand as of Sept. 30, 1918. In addition to this inventory they are permitted to secure 75 per cent of the steel from Oct. 1, 1918, to Sept. 20, 1919, that they had during the previous year. In many cases the inventory on hand amounts to considerably more than the 25 per cent curtailment, so that these concerns do not face any curtailment at all. In some cases it will be possible for them to increase their numerical production.

On the other hand, the small manufacturer who has been in the development stages is apparently denied any such field of manufacture. The ruling is that if he has not built more than ten machines in the year ending Sept. 30 he cannot build more than ten during the year Oct. 1, 1918, to Sept. 30, 1919, no matter whether he has obligated himself for the material and apparently irrespective of any inventory he may have on hand. The ruling to such a group of manufacturers means practically business extinction.

Going a step farther, the ruling provides that those manufacturers that have not manufactured over fifty machines in the past year cannot increase this output. The unfairness of such a ruling lies in the fact that new concerns that have developed tractors and put fifty out have plans laid for manufacturing several hundred next year and have obligated themselves to the parts makers, and in many cases have inventories on hand. At the same time the parts makers have gone ahead with the purchase of materials, as well as the production of parts for these, and the ruling apparently takes no recognition of what the parts maker has done up to the present and provides no modification for these new tractor concerns and their programs.

The committee appointed to go to Washington to try for a modification of the Priorities Division ruling consists of the following members: B. F. Sprankle, C. B. Stebbins, Edward Kohl, John B. Foote, C. W. Lamson, C. L. Barnes, R. K. Schreiber, G. E. Manning, L. M. Turner.

#### Harold M. Wise Dies

NEW YORK, Oct. 16—Harold M. Wise, city sales manager for the Hudson Motor Car Co., was killed in an automobile accident near New Rochelle yesterday. Mr. Wise has been connected with the various organizations operated by Mr. Houpt during the last 14 years.

## Gasless Sundays Off; Ask Voluntary Saving

**Estimated That Seven Motorless  
Days Saved 1,000,000 Gal.—  
Priorities for Exports**

WASHINGTON, Oct. 19—Gasolineless Sundays are off. The Fuel Administration has withdrawn its request, but the need for conservation still exists, and in only a slightly lessened degree. So far no other plan to take the place of gasolineless Sundays has been perfected, though plans are being made, and it is expected that a substitute measure will be submitted very soon. It is likely that this will take the form of a voluntary pledge from motorists.

When the first gasolineless Sunday was inaugurated Sept. 1, the idea was to conserve stocks of gasoline east of the Mississippi so that there might always be a sufficient supply on the Atlantic seaboard to insure prompt and plentiful shipments overseas. Now, however, the Fuel Administration has adopted another means of insuring the overseas supply and, effective at once, will issue priority orders for gasoline to go abroad to our fighting forces. In other words, overseas demands get first call on the supply available. After these are met the remainder may be used for domestic consumption.

The seven gasolineless Sundays saved approximately 1,000,000 gal. of gasoline. No exact figures have been compiled. The Fuel Administration is working on such figures now, and expects they will be ready about Nov. 1. The conservation measure has not materially affected the stocks of gasoline east of the Mississippi. Following are the figures:

### STOCKS OF GASOLINE ON HAND

September 16		October 14	
Motor, bbl.	Aviation, bbl.	Motor, bbl.	Aviation, bbl.
2,949,640	340,883	3,134,731	166,369

These figures represent the entire gasoline reserve east of California and is not all available for export, as it is stored in territory as far west as Wyoming, and includes all interior storage in the various oil producing localities.

The peak load of domestic consumption has now been passed, and it is hoped that the new priority regulations for overseas shipments, combined with a new conservation plan, will make it possible to fill all requirements.

As a further measure to conserve gasoline, Chairman Bernard M. Baruch of the War Industries Board has ordered that the manufacture of all gasoline stoves be discontinued for the present.

It is pretty definitely established that motorists will be asked to restrict the use of gasoline by approximately 20 per cent. This will be done by a voluntary pledge system and it is likely that cards or coupon books for rationing fuel will be adopted.

One such system at present under consideration contemplates the issuance of coupon books with coupons of various colors for the

different months. Such coupons would vary in value in proportion to the quantity of gasoline produced and the quantity used.

For example, a blue coupon for October might be given a value that would permit the holder to purchase two gallons of gasoline on that coupon in October. If stocks of gasoline were considerably depleted in October, leaving not a great amount for November, the yellow, or pink, or green November coupon might have a value of only one gallon of gasoline. Similarly, the orange coupon for January might have a value of three gallons of gasoline if production and stocks on hand were sufficient to warrant motorists using gasoline in such quantities.

Such a plan is favored because of its elasticity. It would permit the government authorities to ration gasoline in exact proportion to production and consumption.

### Dealer Adds a Truck

YOUNGSTOWN, O., Oct. 19—The Garford truck has been added to the automotive line of the Henderson-Overland Co., which has heretofore been an exclusively passenger car business, devoted entirely to the Overland. The Henderson Auto Supply Co., a branch of the business, which handled all equipment sales, has been disposed of and has been reincorporated by H. A. Husted, formerly the manager of this department, as the H. A. Husted Co., and is an entirely new and distinct business. C. O. Dyer, formerly connected with the Overland company in Los Angeles, recently local manager for Warner M. Bateman, distributor of the Maxwell, and since June in the sales organization of the Henderson-Overland, has gone into service with the Emergency Fleet Corp.

### Many Cars Tied Up by "Flu"

BOSTON, Oct. 19—The Spanish influenza epidemic had a peculiar twist for Boston motor dealers. When it got going good the Government sent out an S O S call for tanks of oxygen for the soldiers and sailors and civilians ill with pneumonia. And the demand was so great that the supply of the oxygen makers became exhausted. Orders were given that no tanks were to be turned over to anyone except for Government use. The result is that many cars are laid up for repairs because it is impossible to get oxygen for welding purposes. Some machines have been tied up three weeks, and there is no telling when the demand will be lessened so the service stations can get some.

### Press Feeders on Strike

*Delay in the delivery of Motor World this issue is due to a strike of press feeders in our printing department. The press feeders were under agreement to operate at present rate of compensation until March, 1919, notwithstanding which they have demanded a 25 per cent increase.*

## Truck Sales Manager to Untangle Problems

**Will Effect Uniformity in Contracts, Records and Methods—  
Have Permanent Office**

CLEVELAND, Oct. 19—The National Association of Motor Truck Sales Managers, which was formed about two months ago, held its third meeting yesterday and to-day at the Statler Hotel and outlined plans of action for future work.

It has a permanent office at 1344 Wells Building, Milwaukee, where Executive Secretary J. M. Carney will conduct the organization's business.

One of the first things to be taken up is the contract with dealers, which exists to-day in many varieties. The sales managers believe they can work out a contract which will be acceptable to all the manufacturers.

It is also believed much can be done to make uniform the methods of handling time payments, and that the trading of used trucks can be made a real business and free from the abuses that grew up with passenger car trading.

An interchange of information is also planned, one of the matters to be covered being the records of shifting salesmen who go from plant to plant and work for short periods.

The next meeting will be held Nov. 15-16 at the Lafayette Hotel, Buffalo.

The directors, elected some time ago, chose the following officers: J. E. Tracey, Sterling Motor Truck Co., president; H. T. Boulden, Selden Truck Sales Co., first vice-president; W. D. Wrightmire, Winther Motor Truck Co., second vice-president; E. T. Herbig, Service Motor Truck Co., secretary; A. R. Fernald, Willys-Overland, Inc., treasurer; J. M. Carney, executive secretary.

The directors, in addition to Tracey, Boulden, Wrightmire, Herbig and Fernald, are: F. J. Pardee, Diamond-T Motor Co.; F. L. Pierce, Federal Motor Truck Co.; A. C. Burch, Clyde Cars Co.

The membership includes in addition W. B. Morse, Brockway Motor Truck Co.; B. D. Jones, Republic Motor Truck Co.; W. S. Stevenson, Bethlehem Motor Corp.; F. J. Alvin, United States Motor Truck Co.; G. W. Weller, Indiana Truck Corp.; F. R. Mitchell, Gramm-Bernstein Motor Truck Co.; C. H. Woodruff, O. Armleder Co.; J. D. Potter, American Motor Truck Co.; D. F. Wittaker, Acason Motor Truck Co.; C. H. Roberts, Bessemer Motor Truck Co.; L. Lynch, Columbia Motor Truck & Trailer Co.; W. J. Dietrich, Harvey Motor Truck Co.; C. A. Wales, Locomobile Co. of America; E. F. King, Available Truck Co.

### H. F. Blanchard, of Thermoid Co., a Victim of Pneumonia

TRENTON, N. J., Oct. 21—H. F. Blanchard, sales manager for the Thermoid Rubber Co. for the past three years, died of influenza at his home in Trenton.



## Long Island Dealers See Tractors at Work

### Nassau County Farm Bureau Stages Demonstration—Eight Ma- chines on Field

HEMPSTEAD, L. I., Oct. 19—Eight tractors demonstrated their ability to operate under difficult conditions on a field about 2 miles east of this village this afternoon. The Nassau County Farm Bureau staged the event and the supervision was in the hands of H. J. Evans, county agricultural agent.

The soil was prairie sod, damp and sticky, and to add to the difficulty a ravine that ranged from 3 to 4 ft. in depth crossed the field that was to be plowed. No one could honestly say that the plowing was done under the most favorable circumstances, and yet there was very little real trouble experienced. What trouble the tractors or plows did get into was either from inexperienced operators or from carelessness.

Records were kept of the amount of fuel used and the time spent in plowing the plots. Each tractor was assigned a plot 4 rods wide by 40 rods long, making just an acre. Observers accompanied each tractor and made note of all stops.

The Bureau of Weights and Measures filled the tanks of all the tractors before they started, sealed the filler caps and then made a record of the amount of fuel necessary to fill the tank again after the plowing was finished. This amount represented the quantity of fuel necessary to plow 1 acre.

No tests of drawbar pull were made nor was any account taken of the plowing speed, excepting that the total time consumed in plowing the plot was taken into consideration.

One lesson of the demonstration was that prairie sod cannot be plowed with a rusty plow. One tractor tried it. The plow was left out in the rain for a few nights and then polished up with some emery cloth. The plow, although apparently bright, failed to scour. This plow should have been pulled through sandy soil for a day at least to put a perfect polish on it so that it would scour properly. The plows continually clogged, and this was noticed and commented on so much that the demonstration did not do that particular tractor any good although the tractor itself was operating splendidly.

Getting across the ravine puzzled some of the operators the first couple of times, but most of them solved the problem before the third time around.

One operator lost the coulter on the third plow and wondered why his engine would not pull the plows down the field. When he finally found out what was the matter, it took some time to locate the missing disk under the dirt and trash and still more time in finding the set-screw and casting to fasten it on with. He had no duplicate parts and so it was a case of find the parts or quit. He finally found them.

About 1500 people gathered to witness the demonstration and there was a heavy sprinkling of farmers who looked like real prospects in the crowd.

One of the features which attracted attention was Katherine Freeman driving the Maxim. She came over from the New York State School of Agriculture to witness the demonstration, and after the tractors were about half through she was invited to drive the machine around, which she did very creditably, making the turns at the headlands and operating the plows without assistance.

The following tractors entered and finished:

Parrett 12-25  
Titan 10-20  
Knickerbocker Form-A-Tractor  
Maxim 12-24  
Case 9-18  
Cleveland 12-20  
Fordson  
Moline Universal

## Tractor Makers Grab Coast Dealers in Cars

### Car Distributors Discouraging Their "Subs," So Tractor Men Are Getting Them

LOS ANGELES, Oct. 19—When it comes to the selection of sub-dealers in the small cities and towns, tractor distributors are taking up where motor car distributors are leaving off. For several weeks passenger car distributors here, who also are retail dealers, have been discouraging sub-dealers in the purchase of cars. They want all the cars they can get to sell at retail themselves and do not care for wholesale business any more. Years have been spent in lining up substantial sub-dealers and directing them in sales and service methods, but with prospects for a scarcity of cars ahead the distributors are quitting the wholesale end. They figure sub-dealers will be easy to get when conditions return to normal again and cars are plentiful.

The tractor distributors are farm implement men. They know nothing about marketing through sub-dealers except what they have learned from the automobile industry. They are awake to the opportunity now, however, and every small town dealer is besieged by tractor representatives to take on a line. The sub-dealers are friendly to the proposition, and although in this city tractors and passenger cars are not mixing they are in the smaller places and with quite satisfactory results apparently.

### To Auction Killen-Strait

MILWAUKEE, Oct. 21—The property of the Killen-Strait Mfg. Co., Appleton, Wis., manufacturer of tractors, petitioned into receivership on Sept. 20, will be sold at public auction by Charles L. Marston, Appleton, receiver, on Wednesday, Dec. 11, at 10 a. m.

## Wants "Hub" Buildings for Sailors' Training

### Boston Dealers Asked to Submit Bids for Leasing Their Com- monwealth Quarters

BOSTON, Oct. 19—A number of the big motor dealers in Boston have been asked by the Federal Government to submit bids for leasing their buildings to the Navy Department to house sailors who are being trained in the Boston Naval District. The request came as a big surprise, and found the dealers unprepared to make a quick response.

The section proposed to be taken over by the Government comprises the buildings on Commonwealth Avenue from Lawton Street to the Jewish Temple. This takes in the long structure that houses the Locomobile, Wilton and Cadillac; also the adjoining places where the Nash, Studebaker, Chalmers, Maxwell and Franklin occupy salesrooms. In the rear, on Cummington Street, is the Boice-Perrine Co., the wholesale Studebaker branch, the New England Oakland, the Mathey Tire, and a new building taken over by Joseph Donovan, the Studebaker dealer.

In addition to these places the C. S. Henshaw Co., Dodge Brothers dealer, that just moved into the Packard annex, was requested to submit a bid for that place. The building that the Henshaw company vacated on Boylston Street has been fitted up as a hospital. And the upper part of the Peerless building has been sought.

The Government asked bids for 8 months' occupancy, with a privilege of another year if needed. When the offers were requested there was a mad scurrying around on the part of some of the dealers to get other places. The Kissel agency had just moved out of its big structure on Commonwealth Avenue, and Manager Porter, of the Locomobile company, took over that lease quickly while real estate men were figuring about it.

The offers have been taken to Washington by a naval officer, and the department there will pass upon them. If the plan goes through that part of motor row on Commonwealth Avenue will be wiped out for the present, and some of the dealers think they may not go back again. The Chalmers-Maxwell dealers were fortunate to have a building into which they can move, but the others will be handicapped. Some of them are asking for space from other dealers who have extra room.

### No 3½-Ton Federals Before Jan. 1

DETROIT, Oct. 16—Federal truck dealers have been informed by the company that no promise can be given to supply them with 3½-ton trucks before Jan. 1 owing to the heavy demands being made on the company by the government for this size truck.

## All N. A. D. A. Work to Be in St. Louis

### Secretary's Office to Be Established There and Ruddle to Take Charge of Affairs in Washington

ST. LOUIS, Oct. 21—At a conference held here last week it was decided to remove the office of secretary of the N. A. D. A. to St. Louis at once. Bart J. Ruddle, who has been in charge of the secretary's office in Milwaukee, will go to Washington as representative of the association there.

Assistant Secretary G. Elmo Holke, who has been assisting President F. W. A. Vesper in the office work here, has resigned, and for the present President Vesper will look after the correspondence.

During this conference an additional membership campaign was planned for Executive Secretary Peake, and this will be announced as soon as the influenza situation permits the making of the necessary dates.

President Vesper expects to announce very soon the engagement of a general manager for the association, who will make his headquarters in St. Louis and will take over the office detail. It is expected to have the entire arrangements completed within the next month.

### Peoria for Garage Convention

LA SALLE, ILL., Oct. 19—At a special meeting of the Garage Owners' and Automobile Dealers' Association of Illinois, held here, Peoria was awarded the 1919 state convention, and the dates fixed for the third week in February. Mattoon and Princeton were also candidates for the next meeting place. The Peoria delegation was headed by C. L. Turner and Theodore Bass, and they proved effective speakers in extolling the merits of their city. The meeting endorsed the \$60,000,000 bond issue. The motor car situation was discussed at length, but, owing to limited attendance, due to the epidemic of influenza, no action was taken.

### More Automotive Dealers

COLUMBUS, Oct. 19—Dealers in passenger cars in Columbus are still further changing the nature of their business by taking on tractors. The Columbus Oldsmobile Co., 138 East Gay St., has taken on International trucks and tractors. The Standard Motor Co., formerly central Ohio agent for the Hudson has taken on the Selden and Stewart trucks. The Dunkle-Overland Co., of Columbus, distributor for the Overland has taken on the Parrett tractor. This company also handles Winther trucks.

### Adopt Gasoline Specifications

WASHINGTON, Oct. 18—Following conferences between the Specifications Commission of the Allies and the American Committee on Standardization of Petroleum Products, standard specifications for motor and aviation gasoline

have been adopted. Under these specifications aviation gasoline has a far higher end point than commercial grades of fuel; motor gasoline which is for the use of motor transport vehicles, is slightly different from the commercial grade. Ordinary commercial gasoline has an end point of approximately 450 deg. Fahr. Under the new specifications aviation gasoline has an end point of 347 deg. Fahr. for domestic purposes and 257 deg. Fahr. for the fighting grade and motor gasoline of 420 deg. Fahr.

## Want to Fly, Boys? Then Become Observer

### U. S. Air Service Wants More "Eyes of the Army"—Civilians and Draftees Eligible

WASHINGTON, Oct. 18—The United States Air Service is urgently in need of observers. The service has been thrown open for the induction of draftees, registrants and other civilians, and an opportunity is given men in the ranks to become connected with this service.

The call for war observers has come directly from General Pershing and has been emphasized by Major General Kenly. Pilots and observers are trained in reserve brigades and sent overseas in squadrons as rapidly as possible, fully organized and equipped. The first reserve brigade, which is to consist of 36 squadrons, is located on Long Island on nine different flying fields. The second reserve brigade, consisting of four squadrons, is located at Park Place, Tex. The third will probably be located in New Jersey or in some other district within close proximity to the Atlantic Coast.

The number to be trained in these brigades, however, will be inadequate in view of the greatly increased activities of the American air force, and it is for this reason that civilians and men in the ranks are urged to get into this service.

It is pointed out by the Division of Military Aeronautics that the training of an observer requires 3 months, when the candidate is immediately commissioned a second lieutenant and sent overseas. The training of a pilot, on the other hand, requires 8 months, with the ultimate result of the same grade of commission. Observers are required to pass the same physical tests as pilots, and must have certain flying training to enable them to bring down a plane in the event the pilot is injured.

Civilians or men in the ranks who desire to enter the air service should apply to any recruiting board or examining board for training as observers in the division of military aeronautics.

### No Show for Dallas

DALLAS, Oct. 19—No automobile show will be held in Dallas this year. This has been definitely decided upon by the Dallas Automobile Dealers' Association.

## Make All Contracts Clear, Says Vesper

### Make Sure Tax Is to Be Paid by Buyer—Dealers Gratified at Part in Getting Tax Reduced

ST. LOUIS, Oct. 21—President F. W. A. Vesper, of the N. A. D. A., is advising members to make their sales contracts perfectly clear as to the payment of the Federal tax. His suggestion is that all sales contracts have a clause setting forth the fact that this tax must be paid by the buyer.

President Vesper views with considerable satisfaction the reduction of the tax from 10 to 5 per cent in the Senate consideration of the bill. He says that while the manufacturers are claiming much credit for this, and he is willing that they should, he believes that the action is an indication of what pressure from numbers back home means. He says that the individual dealers in certain steps were advised as to action on their part that would help, and where this action was expected to be the strongest the most effect has been seen. This widely scattered membership is one of the values of a large association.

### Consolidates Ford Agencies

KANSAS CITY, Oct. 18—G. T. O'Maley, Ford sales and service manager in the down-town district, is the first one to inaugurate the consolidation of Ford agencies. He has bought out the Flynn and Breting agency, which serves southern Kansas City, and will make it the South Broadway branch of the G. T. O'Maley sales and service company. The Flynn and Breting agency has had 15 per cent of the Ford business in the city. There are still three other Ford agencies in Kansas City.

### Dealers Playing Safety First

BOSTON, Oct. 19—Some Boston dealers have been asked by factories to send in a complete inventory of what they have in the way of parts. The intimation is that some of these parts may be requisitioned to complete cars that are nearly all assembled, but for which various things like axles or springs, may be shy. But the dealers are hedging. In other words, they are not hurrying themselves on the job. Some of them feel that if they tell what they have the factories will make a haul, and when new cars are finished they may go to the Pacific Coast or elsewhere instead of here. In other words, they fear they might not get their share, and if a customer wants a spring, axle or other part and cannot get it his car will be tied up and he will cuss the dealer. So they are playing Safety First.

### Stinson Buys Stillwater Plant

MINNEAPOLIS, Oct. 19—The Stinson Tractor Co. has purchased the equipment of the Stillwater Steel & Machinery Co.'s plant at Stillwater, Minn.

## California Good Field for Rural Motor Lines

**Climate Always Good and Farmers  
Always Have Produce to Ship  
to the Markets**

LOS ANGELES, Oct. 19—In southern California exists every natural advantage for the successful operation of Rural Motor Express lines but none well systematized and regularly conducted is doing business. The reason is adverse legislation on the part of the smaller cities, towns and hamlets that tends to discourage owners of trucks from entering upon an express line undertaking.

In no place in the country are there such good roads connecting the various cities and towns. In no other section are climatic conditions so favorable for constant truck operation. Produce of all kinds is grown by the ranchers and farmers, and each season sees thousands of dollars worth of perishable foodstuffs decay because the ranchers say they cannot afford the present expense of transportation in the face of existing prices. Los Angeles is the central supply station for every kind of manufactured product from the ocean 100 miles inland and the same distance north and south.

A few individual truck owners have succeeded in making money hauling supplies from the city to ranchers and bringing their produce to the city, but they are compelled to select routes very carefully so as to avoid doing any business in some of the small towns. The reason is the aggrandizing disposition of the town councils or other authorities who insist in levying a special tax on every truck from Los Angeles that loads or unloads within their jurisdiction.

The Los Angeles merchant cannot make suburban deliveries in a number of the neighboring cities unless he takes out a delivery license local in its application. There are but few exceptions to this rule, and as a consequence he makes no deliveries in those places. The smaller communities, in some cases, have not been able to put over this discriminatory legislation and free deliveries are made there, but every town that has reached the 10,000 population figure is against the system. This is in spite of all efforts that have been made by the defense councils to encourage motor transportation.

The Los Angeles truck owner who accepts a consignment of freight to deliver at such places as Pomona, Santa Ana, Long Beach, Anaheim and Venice is spotted immediately upon arrival there by an official who asks if he has a license. If he cannot show it, he must obtain it before unloading his goods, or if he insists upon unloading nevertheless he is put under arrest and jailed until he does take out the license. To reach Santa Ana, as an example, it is necessary to pass through Fullerton and Anaheim. If he stops to make a delivery in each of these towns he has to obtain a license and another at his destination.

Unless he can arrange to make regular deliveries in all the towns along his route, the rural express operator cannot afford to buy all the licenses exacted; consequently in this part of the country, where truck express systems should approach perfection, there has been very little development along this line.

### Influenza Hits Hartford

HARTFORD, Oct. 19—Spanish influenza has taken its toll among Hartford dealers. One of the first to pass out was Samuel R. Taber, treasurer of Russell P. Taber, Inc. His wife died the day after he was buried. James H. MacDonald, formerly with the A. C. Hine Co., but more recently manager of the local Texas Co. branch, died Thursday morning.

### Motorcycle Production Restricted

WASHINGTON, Oct. 19—The manufacture of motorcycles and bicycles has been restricted during the last 4 months of 1918 to 75 per cent of production in the same period during 1917. Such ruling has been made by the Priorities Division of the War Industries Board, which states in Priority Circular No. 37 that makers must reduce their consumption of materials to three-fourths of four-twelfths of the quantity used last year in the same period. Production is not curtailed numerically by specific order. Both the Hendee Mfg. Co., Springfield, and the Harley-Davidson Co., Milwaukee, the two largest manufacturers, are engaged largely on Government work.

### Lippard-Stewart on the Block

BUFFALO, Oct. 18—The business and plant of the Lippard-Stewart Motor Car Co. is to be put up at public auction by the Bankruptcy Court on Oct. 21. The property offered in the sale comprises the entire factory equipment, machine shop, stock in trade and tools and office equipment. The value of the stock, according to schedule filed with the report, is \$78,533.71 and the value of the machinery, tools, etc., is \$18,166.29.

### Packard Income \$5,616,701

DETROIT, Oct. 18—Net profits and income of the Packard Motor Car Co. for the fiscal year ending Aug. 31 were \$5,616,701.57, these figures having been exceeded in only one previous year in the company's history, the 12 months ending Aug. 31, 1916, when the total was \$6,206,419.61. Net profits and income for the year ending Aug. 31, 1917, were \$5,400,691.

### Hippee-States Enlarging

DES MOINES, Oct. 19—The Des Moines Auto Supply Co., jobber and retailer, has discontinued business as the president, B. O. M. Bonebrake, heard the call of Uncle Sam and answered. The stock, equipment and organization of the company have been taken over by the Hippee-States Co., Des Moines.

## Repair Army Trucks in Six Base Camps

**Officers and Men Needed to Keep  
Old Vehicles Running and  
Prepare New Ones**

WASHINGTON, Oct. 21—There will be six great repair bases for army motor trucks in the United States. These are to be located at Camp Holabird, Baltimore, Md.; Atlanta, Ga.; Fort Sam Houston, Tex.; El Paso, Tex.; Chicago, Ill.; San Francisco, Cal. The most important one is that at Camp Holabird, because it serves the largest district and the one that contains nearly all the important truck factories and all the principal ports of embarkation for France. The states in this district are: Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland, West Virginia, Virginia, Kentucky, Ohio, Indiana, Michigan (lower peninsular) and the District of Columbia.

New machines only are sent to the American Expeditionary Forces but, in order that the steady flow of them may be maintained at a maximum, the old trucks that serve the army's needs here must be kept in service as long as the repairman's skill can make it possible. The new district system will greatly facilitate repairs and reconstruction, and it will be the policy of the Motor Transport Corps to discourage major repairs at any other points.

Each district is to be commanded by a District Motor Transport Officer, to be appointed by the chief of the corps, and who will have, under the authority of the chief, control and supervision of all matters pertaining to the operations, maintenance and repair of all Class 1 vehicles and a technical supervision of all Class 2 vehicles. Class 2 vehicles are those assigned to various units outside of the Motor Transport Corps, according to the tables of organization. The Motor Transport Corps is responsible for the repair and maintenance of these vehicles. Class 1 consists of all vehicles operated directly by the corps.

Under the latter heading come the new trucks that are moved from the factories to the seaboard in convoy. Not only do these vehicles relieve the railroads by moving, under their own power, but they help out by taking, each, a load of Government freight. Thousands of tons of freight are being moved in this way all the time. The officers and men who handle these convoys are mostly recent graduates of the corps training schools, who are sent out to complete their training by practical road work, done under the same rules that apply to the American Expeditionary Forces and with conditions duplicated as nearly as possible. Men are drawn largely from the motor trades, although mechanics of other lines may be inducted into the service. Material for officers must combine mechanical knowledge with executive ability.

## Tractors Fail to Make Advertised Schedules

### Stones, Hills and Weeds in Pennsylvania Demonstration Greatly Reduce Speed

HARRISBURG, Oct. 19—Two additional reports on the Pennsylvania State tractor demonstrations held on Sept. 23 and 24 on the State Farm, near here, have been given out by the Department of Agriculture. One of these reports covers plowing by the different tractors on varied surfaces, one of the fields being perhaps as bad a plowing test as ever faced at a tractor demonstration. It was a 2-year-old corn stubble covered thickly with weeds 5 ft. in height and with stones pretty generously scattered over the field. Several of the tractors had to cross a deep gully necessitating a very stiff pull when going each way of the field.

The report of this plowing by nine tractors shows that it is quite impossible to work up to the advertised speed. There was not a single tractor operating in the corn stubble that approached its advertised plowing speed. It was impossible for some of them to average one-half of their advertised speed. This was not always due to the tractor, but very frequently to the plows which gave a good deal of trouble with the tall weeds. The last column in the report of this plowing gives some indication as to the loss of time because of the plows. An official observer accompanied each tractor throughout so that the plow stops are accurate.

Some of the tractors had particularly severe experiences with stones on this work. In this respect Parrett, Allis-Chalmers, Plowman and Plowboy suffered most. They had, with the exception of Parrett, the combination of crossing a fairly deep gully with a stiff climb at each side and each hillside with some very large rocks which were impossible to loosen with the plows. The Parrett met with very severe stone conditions.

The fuel consumption of four of the tractors which had heavy experience with stones and weeds ran over 4 gal. per acre. This is a high figure, but it represents consumption in heavy Pennsylvania plowing. While these figures may appear very severe in view of advertised fuel consumption by many companies they nevertheless give a pretty clear idea of what tractor fuel will cost the Pennsylvania farmer when he expects the tractor to do his very roughest work.

The Cleveland and Moline tractors which used gasoline pulled two plows each, had fuel consumption close to 4 gal. per acre, the Cleveland running a little over this figure and the Moline going just below it.

None of the tractors in the heavy corn stubble averaged much over .75 acre per hour, Huber and Parrett being the only ones to get slightly over this figure and several of the others averaging less than .5 acre per hour.

These figures are valuable in that they represent what a tractor can actually accomplish under very severe conditions in a small field in the east as compared with what they can accomplish on the long level stretches of Kansas or Nebraska.

On the final day of the Pennsylvania demonstrations the different tractors

were given an opportunity of demonstrating what they would do in fitting the soil for winter wheat and seeding it. In this part of the demonstrations each tractor was given approximately a 4-acre field 76 rods in length to fit and seed using whatever combination of discs, harrows and other implements considered best for the work. In these tests the assumption was that all tractors pulled approximately the same capacity of equipment, as the load when drawing these instruments is not so great as when plowing.

These records show the fuel used in cultivating and seeding the 4 acres which varied considerably. Generally it approximated 1 gal. per acre, although in several cases it fell below this, Allis-Chalmers, Plowman and Huber getting below this figure. With the Cleveland and Moline using gasoline, the consumption approximated 1 gal. per acre.

### Ahara Carbureter Patents Upheld

CHICAGO, Oct. 18—Another example of a final patent decision coming almost at the end of the 17-year life of the patent is the Stromberg-Zenith carbureter controversy based on the Ahara patent owned by Stromberg, and which suit has been finally settled in favor of Stromberg by ruling of the Circuit Court of Appeals for the Seventh District of Illinois.

The Ahara patent, covering basic features in the operation of the Stromberg and a Zenith model, was issued on Oct. 15, 1901, and so expires on Oct. 15, 1918, or less than 2 weeks after the final decision was handed down.

By the decision the Zenith design in

### Pennsylvania State Tractor Demonstration—Fitting and Seeding Records Tuesday, September 24, 1918

Pennsylvania State Tractor Demonstration—Fitting and Seeding Records Tuesday, September 24, 1918				Acres Fitted and Seeded	Gallons Kero- sene Used	Gallons Gas- oline Used	Gross Time	Net Time	Tractor Stops	Implement Stops	
No.	Make of Tractor	Rating									
1.	Emerson-Brantingham	12-20	Emerson 8-ft. double disc and spike-tooth harrow .....	3.886	4.56	.687	1:50	1:50	0	0	
			Emerson grain drill, 12 x 7 .....	3.886	5.375	.375	2:34	2:34	0	0	
2.	Knickerbocker	22	Withdrew								
3.	Reed	12-20	Withdrew								
4.	Parrett	12-25	Bissell 8-ft. double disc and Superior grain drill, 11 x 8 ...	3.886	5.00	.125	2:22	2:22	0	0	
5.	I. H. C.	8-16	Withdrew								
6.	Cleveland	12-20	Oliver 8-ft. double disc and Oliver 8-ft. pulverizer .....	3.886		4.25	1:54	1:26	0	28	
			Massey-Harris grain drill, 10 x 7 .....	3.886		4.00	1:48	1:23	25	0	
7.	Case	9-18	Superior 8-ft. double disc and Oliver pulverizer .....	3.886	4.00	.125	1:25	1:19	0	6	
			Superior grain drill, 11 x 8 .....	3.886	4.00	.375	1:40	1:34	0	6	
8.	Huber	12-25	Oliver 8-ft. double disc and Oliver pulverizer .....	3.886	4.187	.375	1:27	1:27	0	0	
			Superior grain drill, 11 x 8 .....	3.886	3.00	.187	1:09	1:04	0	5	
9.	I. H. C. Titan	10-20	Withdrew								
10.	Plowman	15-30	Oliver 8-ft. double disc .....	3.886	3.25	1.00	1:53	1:53	0	0	
			Emerson grain drill, 12 x 7 .....	3.886	4.437		1:48	1:48	0	0	
11.	Plowboy	13-30	Oliver 8-ft. double disc and Oliver pulverizer .....	3.886	4.50	.50	2:09	2:09	0	0	
13.	Waterloo	12-25	Withdrew								
14.	Frick	12-25	Massey-Harris 8½-ft. double disc and pulverizer .....	3.886	4.56	.25	1:52	1:41	11	0	
15.	Allis-Chalmers	10-18	Bissell 8-ft. disc and Oliver pulverizer .....	3.886	3.50	1.50	2:06	2:00	0	6	
			Superior grain drill .....	3.886	3.00	.50	1:55	1:55	0	0	
16.	Moline	9-18	Moline 7-ft. double disc and roller .....	3.886		5.50	1:43	1:43	0	0	
			Superior grain drill, 11 x 8 .....	3.886		4.00	1:36	1:36	0	0	

question is held to infringe the Ahara patent, which is sustained by the decision. The court has directed an accounting of profits by Zenith. No injunction was asked against Zenith to prohibit its continuing to manufacture this model, as the expiration of the Ahara patent is so close at hand.

The Ahara patent was issued to George V. Ahara of Beloit, Wis., and later purchased by Stromberg. It basically covers what is familiarly known as the atmosphere type of carburetor in which the richness of the mixture at high speeds is eliminated by means of an air tube in conjunction with the fuel spraying nozzle, this air tube being open to the atmosphere and also having a connection with the fuel feed in the nozzle. By this means more air in proportion to fuel is furnished at high speeds, the result being the same as that obtained by the auxiliary air valve as used on many makes of carburetors.

#### 24 Companies Get Orders for 25,000 Class B Trucks

WASHINGTON, Oct. 11—Orders have been placed with 24 companies for 25,000 Class B 3-ton Army trucks as follows:

United Motors Co.	Grand Rapids
Signal Motor Truck Co.	Detroit
Vim Motor Truck Co.	Philadelphia
Winther Motor Truck Co.	Winthrop Harbor, Ill.
Brockway Motor Truck Co.	Cortland, N. Y.
Denby Motor Truck Co.	Detroit
Lewis Hall Iron Works	Detroit
Republic Motor Truck Co.	Lima
Bethlehem Motor Truck Co.	Allentown
Diamond T. Motor Truck Co.	Chicago
Rowe Motors Mfg. Co.	Lancaster
J. C. Wilson Co.	Detroit
Sterling Motor Truck Co.	Milwaukee
Indiana Truck Corp.	Marion
Clyde Cars Co.	Clyde
Maccar Co.	Sterling, Pa.
United States Motor Truck Co.	Cincinnati
Gramm-Bernstein Motor Truck Co.	Lima
Service Motor Truck Co.	Wabash
Standard Motor Truck Co.	Detroit
Atterbury Motor Car Co.	Buffalo
Midland Motor Truck Co.	Oklahoma City
Velle Motor Truck Co.	Moline
Selden Motor Truck Co.	Rochester

## Demand for Women to Drive Trucks Grows

### Philadelphia Has a School and the Pupils Are Learning Rapidly—Good Wages

PHILADELPHIA, Oct. 19—The demand for women drivers of commercial cars is increasing rapidly throughout Pennsylvania. The National League for Woman's Service is co-operating with the Autocar Co. in Philadelphia to meet this demand and supply women from 20 to 45, especially those whose husbands or relatives may be engaged in war work across the sea.

A class in motor truck driving and lighter motor mechanics is learning under the guidance of the Autocar Sales and Service Station at Market and Twenty-third Streets. This plan already has resulted in the placing of some of the pupils in good positions.

The classes were to have been limited to eight girls at a time, but on account of the large number of applications this limit has been extended, so that half of the students may be engaged in learning repairs, while the others learn to handle the trucks.

At 2 o'clock every afternoon the Autocar instructor takes the class out in a 2-ton service body express truck, at first going where the traffic is light and increasing the complexity of driving until, when the course is approaching a close, the girls are taught to steer and turn in the heaviest traffic centers of the city. Only a strong type of girl is picked for the work, which is more or less strenuous, as the practice entails not only quick headwork but much hopping in and out of the car. In dexterity and accuracy the girls are said to equal high grade men drivers.

Women chauffeurs are in heavy demand at Hog Island shipyard, so much so that the employment office there and its branch on Arch Street, Philadelphia, have standing advertisements in the newspapers for girls and women to drive several types of vehicles. They must be able to make minor road repairs, change tires and do their own cranking. The wages are \$3.50 a day and \$5.25 for Sunday work.

Outside of Philadelphia the woman chauffeur is becoming an increasingly important factor in car driving. The Harrisburg Bag & Box Co. is having success with women drivers, Mrs. Nettie Frost being the first to obtain a position there. Here, as in the case of the National League for Woman's Service plan, the idea is to give such positions to women whose male support has been, or is about to be withdrawn, because of the war. Mrs. Frost's husband is an employee of the Central Iron & Steel Co., but soon will be called to the colors.

#### To Make Removable Body Truck

NEW YORK, Oct. 14—A company is in process of formation for the manufacture of a new type of motor truck and removable body with which it is hoped to solve many of the short haul problems of the railroads. The plan, in brief, is to produce wheeled bodies which may be carried intact by the railroads on flat cars and shifted from these cars at the end of the run direct to motor truck chassis. The cars would then be delivered by the motor truck to the consignee who would draw them off the truck chassis and move them into position for unloading on their own wheels. Both the truck chassis and the bodies are the invention of Jos. C. Bonner, who heads a syndicate which shortly is to be converted into a manufacturing company.

### Pennsylvania State Tractor Demonstration—Second Day's Plowing Monday, September 23, 1918

No.	Name	Rating	Plows	Entered Speed	Speed in Work	Acres Plowed	Acres per Hour	Gallons Kerosene per Acre	Gallons Gasoline per Acre	Gallons Kerosene Used	Gallons Gasoline Used	Gross Plowing Time	Net Plowing Time	Tractor Stops	Plow Stops
1.	Emerson-Brantingham	12-20													
2.	Knickerbocker*	22	Withdrawn												
3.	Reed	12-20	Withdrawn												
4.	Parrett*	12-25	3-14	2.375	1.779	4.24	.755	4.01	.059	17.00	.25	5:37	4:44	8	45
5.	I. H. C.	8-16	Withdrawn												
6.	Cleveland*	12-20	2-14	3.50	2.474	1.423	.699	....	4.22	....	6.00	2:02	1:42	1	19
7.	Case	9-18	2-14	2.25	2.489	2.23	.704	2.916	....	6.50	....	3:18	3:18	0	0
8.	Huber*	12-25	3-14	2.50	1.962	2.670	.834	2.902	.187	7.75	.50	3:125	2:545	0	18
9.	I. H. C. Titan*	10-20	Withdrawn												
10.	Plowman*	15-30	3-14	3.00	1.425	2.389	.605	5.102	.078	12.187	.187	3:57	3:46	9	2
11.	Plowboy*	13-30	3-14	2.33	1.143	1.423	.485	5.270	.966	7.50	1.375	2:56	2:31	0	25
13.	Waterloo	12-25	Withdrawn												
14.	Frick	12-25	3-14	2.30	2.079	3.19	.882	2.351	.191	7.50	.609	3:37	3:13	0	24
15.	Allis-Chalmers*	10-18	2-14	2.25	1.667	1.866	.436	4.183	.904	7.75	1.687	3:57½	3:28½	0	29
16.	Moline*	9-18	2-14	3.50	1.479	1.067	.418	....	3.925	....	4.187	2:33	1:46	0	47

\* Tractors Nos. 2, 4, 6, 8, 10, 11, 15, 16 plowed in a two-year-old corn stubble field that was overgrown with weeds 5 feet high, contained many large stones in some sections and had several gullies and grades. This was the hardest plowing test during the entire demonstration. All other plowing shown on this report was done on sod fields. The corn stubble plot was divided for 1 hr. 15 min. work for each machine. Tractor No. 2 withdrew during the day, and tractors Nos. 5, 9, 13 did not report, and tractor No. 1 was engaged in work which appears on Table No. 1.



## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

H. A. Rainbow has been appointed manager of service for the Cadillac Motor Co. of Denver.

C. C. Winningham, who on Aug. 1 was appointed chief of the Gasoline Section and Director of Publicity of the Oil Division of the Fuel Administration, has left that division. He has taken up other work with the Department of Labor. Winningham's place is to be taken by George H. Pride, of the Heavy Haulage Co., New York, who is regional director for a number of eastern states for the Highways Transport Committee. Pride is giving up his work with the Highways Transport Committee.

Lester W. Place has resigned as sales manager of the Allen Motor Co., Fostoria, Ohio, and will announce his future plans shortly.

V. C. Fuller has been appointed special traveling representative of the Bearings Service Co., Detroit, with headquarters at the main office.

Lee Anderson, vice-president and sales manager of the Hupp Motor Car Corp., Detroit, has taken charge of the publicity and advertising work of the Aircraft Production Bureau in Detroit. Newspaper advertisements, a house organ for employees and feature posters are among the means which he will use to stimulate increased production.

C. E. Morton, formerly Pacific coast district manager for the Packard Motor Car Co., has been appointed manager of the Packard overseas division.

A. F. Knobloch, vice-president and works manager of the Cleveland Tractor Co., Cleveland, has been appointed assistant to L. J. Horowitz in the Ordnance Department at Washington. In that capacity he will represent Horowitz in matters having to do with the practical, manufacturing and technical details in providing the fighting tanks required in Europe.

E. H. Geyer, formerly with the Byrnes-Kingston Co. and Kokomo Electric Co., has been appointed general sales manager of the Hercules Motor & Manufacturing Co., Canton, Ohio.

L. H. Boydston, formerly director of sales for the Sandow Motor Truck Co., Chicago, has become associated with the Service Motor Truck Co., Wabash, and will assume the duties of district sales manager in the territory comprising Wisconsin, Minnesota, Iowa, North and South Dakota and Nebraska. Boydston succeeds Frank A. Drage, who formerly covered this territory for Service.

Guy Simonson, sales manager of the Service Motor Co., Fond du Lac, Wis., has resigned to enter the military service, having enlisted some time ago in the motor tank service. He has gone to Camp Colt, Gettysburg, Pa., for training.

W. S. McNamara, former assistant manager of the Ford Motor Co. in Portland, has been appointed manager to succeed A. W. Jones, who recently died in Portland. McNamara has been manager of the Ford branch at Wichita, Kan., and as office manager of the Ford blast furnace for manufacture of coke and iron since last September.

L. F. Spurgeon, manager of the Auto Service Co., Clintonville, Wis., for the last three

years, has resigned to become associated with the Matthews Gravity Carrier Co., Pittsburgh, Pa., manufacturer of farm equipment.

Frank P. Nusslock, formerly Northwestern factory representative of the Selden truck, and more recently manager of the truck department of the Mitchell Automobile Co., Milwaukee, state distributor of the Selden, has resigned to accept the position of district sales manager of the Parker Motor Truck Co., Milwaukee, formerly the Stegeman Motor Car Co., manufacturers. Nusslock's territory includes Wisconsin, Michigan, Minnesota, North Dakota and Indiana.

Ralph H. Ratliff, advertising manager, Butler Mfg. Co., Indianapolis, has resigned and will take up farming as his future business.

### John D. Aitken Influenza Victim

INDIANAPOLIS, Oct. 19—John D. Aitken, who established a record as a racing driver first on National and later on Peugeot cars, died here Oct. 15 of Spanish influenza. He was 32 years old and up to recently had been prominent as a racing driver since the days of the old Vanderbilt cup races. From 1904 till quite recently he was connected with the National company and lately had been doing special work for James Allison and Carl Fisher.

### Towsen Heads Anderson Electric

DETROIT, Oct. 19—William C. Anderson, for more than 30 years actively engaged in the carriage and electric vehicle industries in Detroit, has retired from the presidency of the Anderson Electric Car Co., which produces the Detroit electric. He will retain his interest with the company and remain in an advisory capacity as chairman of the Board of Directors. He is succeeded as president by M. S. Towsen, who has been head of the Elwell-Parker Co., Cleveland, which produces electric industrial trucks and is closely affiliated with the Anderson company.

Mr. Anderson was the organizer and head of the original Anderson Mfg. Co., which started to produce carriages in Port Huron, Mich., in 1895. Shortly thereafter the company was removed to Detroit and continued as a manufacturer of carriages and electric vehicles. In 1911 the name of the company was changed to Anderson Electric Car Co.

Coincident with the retirement of Mr. Anderson, a number of other changes have been made in the personnel of the company. G. D. Fairgrieve has been elected vice-president and general manager; W. M. Locke, treasurer; W. P. McFarlane, secretary; Wilson Critzer, assistant secretary; George M. Bacon, electrical engineer.

The Board of Directors includes these men with W. C. Anderson as chairman and J. B. Book, William H. Murphy and F. E. Price. Mr. Price, who was formerly advertising manager, hereafter will devote his entire time to the development of the sales division of the industrial truck department in Detroit and vicinities.

The company's two plants in Detroit and Cleveland have been enlarged with increased capacity for passenger cars, trucks and industrial tractors.

## Government Looks Into Dealer Stocks on Hand

### Johnson of Boston in Conference at Washington on Present Condition of Supplies

BOSTON, Oct. 19—John H. Johnson, a director of the N. A. D. A., returned from Washington yesterday, where he was in conference with other officers of the organization and also with some of the members of the War Industries Board relative to the work of conservation being carried on in the New England territory.

He reported that a committee had been formed of accessory men to secure information for the board on the amount of stock that the dealers had on hand at the present time. He told the men he talked to that he found the accessory men willing to co-operate in every way with the officials at Washington, and that within a short time it would be possible to let them know where Boston stood in the way of supplies.

Johnson also discussed informally with some of the men there the gasoline situation, and he outlined a plan that he thought might be of some value in getting away from a lot of red tape and the necessity of a bureau with a lot of clerks keeping tabs on the fuel.

His idea is to have the motorists buy their fuel at recognized dealers where they become regular customers. If they buy a supply, whatever the Government allows, they get a receipt with the date stamped on it. Before they can buy another supply they must surrender that receipt, and so they cannot get fuel twice the same day. The oil man would be told how much a motorist could purchase at a time.

To prevent fraud Mr. Johnson would have the Highway Commission suspend for at least 30 days the registration of the car or the right of the man to drive, and the fuel dealer would be shut up for a week or more according to the circumstances. In this way the whole method would be thrown on the fuel dealer and the motorist to see that the Government was given a square deal.

### Mack Heads Hoover Steel Ball

ANN ARBOR, MICH., Oct. 18—Walter C. Mack was elected president of the Hoover Steel Ball Co. at the annual meeting of the stockholders. He takes the place of L. J. Hoover, who died recently. The other officers are: Vice-president, F. A. Stivers; treasurer, M. J. Fritz; secretary and manager, H. D. Runciman; assistant secretary, William Arnold, Jr. These officers and Dr. L. P. Hall, D. F. Zimmerman, H. A. Douglass and R. T. Dobson form the board of directors. The executive committee consists of R. T. Dobson, Dr. L. P. Hall, M. J. Fritz, F. A. Stivers and William Arnold, Jr.

## Dealers Should Take Hold of Tractor Situation

(Continued from page 11)

slopes of over 50 per cent. There were 36 tractors of 22 different makes, as follows:

Cleveland, Moline, Waterloo Boy, Case, International, Lauson, Nilson, Monarch, Crundaar, Russell, All-Work, Avery, Samson, Aultman & Taylor, Bean, Bull, Best, Holt, Four-Wheel-Drive, Rumely, Yuba and Twin City. The average estimate of attendance, during the entire three days, was about 15,000 people. At one time there were parked at the headquarters of the ground some fifteen hundred cars. This demonstration showed the farmers what the tractor could do on both level and hilly ground, and did a great deal to stimulate the tractor business in that section. More work of the same kind would further stimulate the business.

The State Fair Board has fathered the idea in Oregon, and held a demonstration in which about 30 tractors plowed and did other farm work.

Probably the big practical benefit resulting from demonstrations such as the great majority is that *the farmers are shown that the tractor will really run, and that it will draw plows and do other work, but the business has progressed beyond the stage where it is necessary to show the average farmer that a tractor will run. He already knows it.* He has been educated by reading and by individual tractors that he has seen in operation.

What the industry must do now is settle down to a merchandising stage and get some real merchandising information, and also improve its engineering designs. *This cannot be done with the greatest rapidity unless tractors are put into real competition in these demonstrations and unless there is operation under rules and supervision by competent and creditable authority.*

The authorities who seem most readily available to take hold of this supervision are the various state officers. If they will place themselves in the position of supervisors and promoters the dealers can act in a subsidiary capacity and be of wonderful assistance in *helping these state officials put on real demonstrations that will give a real boost and make the tractor business a real business.*

### Indianapolis Association Did Lot of Work

INDIANAPOLIS, Oct. 18—During the past year the Indianapolis Automobile Trade Association has been engaged in

many activities, as shown by the annual report of Manager John B. Orman in The Dealer, a new information sheet published by the organization.

The association secured the removal of a tax on trucks entering Indianapolis from out of town with freight.

Active part was taken in all the loan and other war campaigns and the association has been represented in every movement of consequence during the past year, all of which has given the organization standing in its city.

A show was held at the Indiana fair. Information calls at the office at 338 North Delaware Street are growing in number, the office being consulted by the townspeople on a variety of subjects. Various associations and Federal agencies seek the co-operation of the association.

The organization is in good financial condition.

### Rural Express Invades Canada

TORONTO, Oct. 19—Rural Motor Express lines are likely to become a prominent feature of rural life in Canada in the near future. Already one Canadian company, with headquarters in Toronto, has established such a line, and has a fleet of twenty-five trucks in operation. No doubt this is merely the precursor of many similar lines throughout Eastern Canada.

With the railways devoted almost entirely to the winning of the war and the consequent preference given to the haulage of war materials and fuel for the munition factories and the transportation of the finished products to the seaports, the small shipper is subjected to unusual hardships to get his product to the purchaser, and this is particularly true where but comparatively short hauls are required. Opportunities for the establishment of such motor express lines open a field for the man who has only one truck and for the organization of companies with considerable capital and a profitable enterprise, and at the same time help their country in the time of its need.

### Rural Express for Portland

PORTLAND, Oct. 19—Rural motor truck lines are to be established out of Portland and other cities in Oregon, under the direction of Amos Benson, state chairman of the Highways Transport

Committee. Eventually, as the organization is perfected and truck lines are established, attention will be directed to forming return load bureaus, through which the trucks may be assured of full loads in both directions.

### Specialists in Foreign Advertising Open New York Office

NEW YORK, Oct. 21—The J. Roland Kay Co., Chicago, handling the foreign advertising of a number of firms, including the Willys-Overland Co., the U. S. Rubber Co. and the Remington Arms U. M. C. Co., has opened a New York office at 18 East Forty-first Street. The company also has offices at London, England; Tokyo, Japan; Sydney, Australia; Capetown, South Africa, and Buenos Aires, Argentina.

### Philadelphia After Car Crooks

PHILADELPHIA, Oct. 19—Pennsylvania now has a "clearing house" for the recovery of stolen trucks and passenger vehicles. It is in Harrisburg and police officials of the state believe that at last they have discovered the right method of breaking up the practise of stealing cars. The "clearing house" plan is as follows:

First letters were sent to virtually everyone of the 300,000 motor car owners in the state urging them to register, with a fee of \$1, with the "clearing house."

The application for registration includes name and address of owner, serial number of car's manufacture, license and engine numbers and name of model, with full description of car. A numbered registration card with the same information is issued to the registration. The card number allotted to the registration is an especially important feature, because the number and a duplicate registration card, with an up-to-date record of state licenses issued, will be supplied to all police departments in the state, for it is with these various departments that the "clearing house" will co-operate.

If the registrant's car is stolen he must report his registration or card number to the nearest police headquarters and immediately notify the "clearing house." Within an hour or so every police department in the state can set its machinery at work in spreading a net for the thief. Applications already are being made for registry.

## Coming Events

Dallas, Tex.	Seventh Annual Texas Automobile Show	Oct. 14-27
	Texas State Fair.	
Macon, Ga.	State Fair	Oct. 30-Nov. 9
Shreveport, La.	State Fair	Oct. 28-Nov. 4
Phoenix, Ariz.	State Fair	Nov. 11-16
Atlantic City, N. J.	Annual Convention, Automobile Accessories Branch, National Hardware Association of the United States, Marlborough-Blenheim Hotel.	Oct. 22-24
Pittsburgh, Pa.	Fall Automobile Show, Motor Square Garden, Automobile Dealers' Association of Pittsburgh.	Nov. 11-16
Akron, O.	Annual Convention, Ohio Automobile Trade Association, Firestone Tire & Rubber Co.'s Club House.	Dec. 5-6
Des Moines, Ia.	First Tractor Show, Des Moines Thresher & Tractor Club. H. J. Clark, Mgr.	Jan. 13-19

# MOTOR WORLD GUIDE

Digitized by Google

Name and Model	Tons Capacity	Chassis Price	Cylinder Bore and Stroke	F. P. R.	TIRES
Studebaker SF	1	1045	4-3 1/2	35x4 1/2	35x4 1/2
Studebaker	7 1/2	1400	4-3 1/2	35x5 1/2	35x5 1/2
Salvini	7 1/2	2350	4-3 1/2	36x3 1/2	36x3 1/2
Salvini	E 2	2850	4-1 1/2	36x4	36x4
Superior	A	1900	4-3 1/2	34 1/2	34 1/2
Superior	C 2	2200	4-3 1/2	36x4	36x6
Tiffin	A	1100	4-3 1/2	35x4 1/2	35x4 1/2
Tiffin	GW	1700	4-3 1/2	36x3 1/2	36x5
Tiffin	FW	2750	4-1 1/2	36x4	36x3 1/2
Tiffin	FW 3	3900	4-1 1/2	36x5	36x5
Tiffin	FW 6	4550	6-3 1/2	36x5	40x6
Tiffin	SW 6	4850	6-3 1/2	36x6	40x6
Titan	6	5100	4-1 1/2	36x5	40x6
Titan	6	5100	4-1 1/2	36x6	40x6
Traffic		2	1195	4-3 1/2	34 1/2
Transport Tractor	N 5	2750	4-3 1/2	34 1/2	34 1/2
Triangle	A 1 1/2	2185	4-3 1/2	34 1/2	34 1/2
United	AX 1 1/2	2600	4-3 1/2	34 1/2	34 1/2
United	BY 1 1/2	3300	4-1 1/2	36x4	36x6
United	CX 1 1/2	3900	4-1 1/2	36x5	36x6
United	VX 1 1/2	4700	4-1 1/2	36x6	40x6
United Tractor	6	2400	4-1 1/2	34 1/2	34 1/2
U. S.	E 2 1/2	3250	4-1 1/2	34 1/2	36x4
U. S.	D 2 1/2	3500	4-1 1/2	36x5	36x6
U. S.	J 2 1/2	3950	4-1 1/2	36x5	40x6
U. S.	K 2 1/2	4850	4-1 1/2	36x5	40x6
Universal	C 1 1/2	1900	4-3 1/2	34 1/2	34 1/2
Universal	D 2	2800	4-1 1/2	36x4	36x4
Universal	A 3	3400	4-1 1/2	36x5	36x6
Valin	25A 2	2950	4-1 1/2	36x4	36 1/2
Valin	26A 3	3900	4-1 1/2	36x5	36x6
Vim	21 1/2	945	3-3 1/2	31x4	31x4
Vim	25 1/2	2195	4-3 1/2	34 1/2	34 1/2
Vim	22 1/2	3150	4-3 1/2	36x4	38x6
Vim	23 1/2	3950	4-1 1/2	36x4	38x6
Walter	F 5	5000	4-1 1/2	40x6	40x6
Watson	Tractor 5	4050	4-1 1/2	36x4	40x6
White	GBBE 4	2300	4-3 1/2	34 1/2	34 1/2
White	TBC 1 1/2	3300	4-3 1/2	36x3 1/2	36x3 1/2
White	TAD 3	4100	4-3 1/2	36x5	40x6
White	TCD 5	5000	4-1 1/2	36x5	40x6
Wichita	A 1	1850	4-3 1/2	34 1/2	34 1/2
Wichita	K 1	2000	4-3 1/2	36x3	36x4
Wichita	L 1 1/2	2350	4-3 1/2	36x3	36x5
Wichita	B 2	2500	4-3 1/2	34 1/2	34 1/2
Wichita	R 2 1/2	2950	4-3 1/2	36x4	38 1/2
Wichita	O 3 1/2	3400	4-1 1/2	36x5	38x6
Wichita	Q 5	4600	4-1 1/2	38x6	38x6
Wilson	X 1	2075	4-3 1/2	35x5 1/2	35x5 1/2
Wilson	Y 1 1/2	2775	4-1 1/2	36x4	36x5
Wilson	O 2 1/2	3250	4-1 1/2	36x4	36x3 1/2
Wilson	P 3	3950	4-1 1/2	36x5	38x6
Wilson	W 5	5000	4-1 1/2	36x5	40x6
Wilson	E 2	1850	4-3 1/2	35x5	35x5
Wilson	6	3900	4-1 1/2	36x5	38x6
Wilson	6	4600	4-1 1/2	36x6	40x6
Winther	36 1/2	2250	4-3 1/2	34 1/2	34 1/2
Winther	48 2	3000	4-1 1/2	36x4	36x4
Winther	68 2	3800	4-1 1/2	36x5	36x6
Winther	88 4	4200	4-1 1/2	36x5	40x6
Winther	108 5	6000	4-1 1/2	36x5	40x6
Winther	128 6	5250	4-1 1/2	36x6	40x12
Winther	148 7	5500	4-1 1/2	36x6	40x14
Win WEL	WD18 1	2000	4-3 1/2	36x3 1/2	36x3 1/2
Win WEL	WD18 2	2850	4-1 1/2	36x3	36 1/2
Win WEL	4 1/2	1825	4-3 1/2	34 1/2	34 1/2
Walsh	4 1/2	1825	4-3 1/2	34 1/2	34 1/2
Walsh	4 1/2	1825	4-3 1/2	34 1/2	34 1/2
Walsh	4 1/2	1825	4-3 1/2	34 1/2	34 1/2

Name and Model	Tons Capacity	Chassis Price	Cylinder Bore and Stroke	F.	R.	TIRES
Sandew.....	H 1 1/2	2550	4-3 1/2x5	34 1/4	34 1/2	
Sandew.....	J 3 1/2	3250	4-4 1/2x5	36 1/4	36 1/2	
Sandew.....	K 5 1/2	3250	4-4 1/2x5	36 1/4	36 1/2	
Sandew.....	W25 1/2	3975	4-4 1/2x5	36 1/4	36 1/2	
Sandew.....	W25 2 1/2	3000	4-4 1/2x5	36 1/4	36 1/2	
Sandew.....	W50 1/2	4750	4-4 1/2x5	36 1/4	40 1/2	
Schleicher.....	2	3500	4-4 1/2x5	34 1/4	34 1/2	
Schleicher.....	5 1/2	4000	4-5 1/2x5	34 1/4	34 1/2	
Salden.....	TXL 1	1900	4-3 1/2x5	34 1/2	34 1/2	
Salden.....	TWL 1	2100	4-3 1/2x5	34 1/2	34 1/2	
Salden.....	JCB 2	2750	4-4 1/2x5	36 1/4	36 1/2	
Salden.....	JWB 2	2950	4-4 1/2x5	36 1/4	36 1/2	
Salden.....	NL 3 1/2	3450	4-4 1/2x5	36 1/4	36 1/2	
Salden.....	DL 5	4950	4-4 1/2x5	36 1/4	40 1/2	
Service.....	220 1	2100	4-3 1/2x5	34 1/2	34 1/2	
Service.....	240 2	3000	4-4 1/2x5	36 1/4	36 1/2	
Service.....	270 3 1/2	3900	4-4 1/2x5	36 1/4	36 1/2	
Service.....	275 3 1/2	4200	4-4 1/2x5	36 1/4	36 1/2	
Service.....	300 5	4900	4-4 1/2x5	36 1/4	40 1/2	
Signal.....	F 1 1/2	2700	4-4 1/2x5	34 1/2	34 1/2	
Signal.....	H 1 1/2	3400	4-4 1/2x5	34 1/2	34 1/2	
Signal.....	J 2 1/2	3100	4-4 1/2x5	34 1/4	34 1/4	
Signal.....	M 3 1/2	4100	4-4 1/2x5	36 1/4	40 1/2	
Signal.....	R 5	5100	4-4 1/2x5	36 1/4	40 1/2	
Standard.....	70 2	2900	4-4 1/2x5	36 1/4	36 1/2	
Standard.....	65 3 1/2	3975	4-4 1/2x5	36 1/4	36 1/2	
Standard.....	85 5	4650	4-4 1/2x5	36 1/4	40 1/2	
States.....	1	650	4-3 1/2x4	32 1/4	32 1/4	
Sterling.....	2 1/2	3300	4-4 1/2x5	36 1/4	36 1/2	
Sterling.....	3 1/2	4325	4-4 1/2x5	36 1/4	40 1/2	
Sterling.....	5 1/2	5600	4-4 1/2x5	36 1/4	40 1/2	
Sterling.....	7	6600	4-4 1/2x5	36 1/4	40 1/2	
Stewart.....	6 1/2	950	4-3 1/2x4	32 1/4	32 1/4	
Stewart.....	8 1/2	1175	4-3 1/2x5	34 1/2	34 1/2	
Stewart.....	9 1/2	1975	4-3 1/2x5	34 1/2	34 1/2	
Stewart.....	7 1/2	2975	4-4 1/2x5	34 1/4	34 1/4	

## SPECIFICATIONS

these pages have been pre-  
sisting the salesman in the  
s and commercial vehicles.  
ose facts which the average  
mparative purposes and as  
and revised down to date

others from week to week,  
an and repairman who has  
rs and commercial vehicles

Name and Model	Tons Capacity	Classified Price	Cylinder Bore and Stroke	P.	R.	TIRES
Palmer	1	1085	4-3 1/2 x 5	34 1/2	34 1/2	34 x 4
Palmer	1 1/4	2495	4-1 1/2 x 5	36 1/2	36 1/2	36 x 3 1/2
Panhard	A 1	1105	4-3 1/2 x 5	32 1/2	32 1/2	32 x 3 1/2
Panhard	B 1 1/2	1395	4-3 1/2 x 5	32 1/2	32 1/2	32 x 4
Parker	2	2800	6-3 1/2 x 5	34 1/2	34 1/2	36 x 4 1/2
Parker	3	3350	6-3 1/2 x 5	34 1/2	34 1/2	36 x 5 1/2
Parker	4	4000	6-3 1/2 x 5	35 1/2	35 1/2	40 x 5 1/2
Parker	5	4750	6-3 1/2 x 5	36 1/2	36 1/2	40 x 5 1/2
Peerless	TC 4	4150	4-1 1/2 x 5	36 1/2	36 1/2	42 x 6 1/2
Peerless	TC 5	4700	4-1 1/2 x 5	38 x 6	38 x 6	42 x 6 1/2
Peerless	TC 6	5200	4-1 1/2 x 5	38 x 7	38 x 7	42 x 7 1/2
Pierce-Arrow	2	3750	4-1 1/2 x 5	35 1/2	35 1/2	36 x 4 1/2
Pierce-Arrow	5	5500	4-1 1/2 x 5	36 1/2	36 1/2	40 x 6 1/2
Rainier	1	1350	4-3 1/2 x 4	33 1/2	33 1/2	33 x 4
Rainier	1 1/2	1585	4-3 1/2 x 4	32 1/2	32 1/2	32 x 4
Rennet	2 1/2	2895	4-3 1/2 x 5	36 1/2	36 1/2	36 x 7
Rennet Tractor	6	3250				
Reo	F	1275	4-1 1/2 x 4	34 1/2	34 1/2	34 x 4 1/2
Republic	Dispatch	1095	4-3 1/2 x 5	32 1/2	32 1/2	32 x 3 1/2
Republic	Special	1295	4-3 1/2 x 5	32 1/2	32 1/2	32 x 4
Republic	10	1485	4-3 1/2 x 5	34 1/2	34 1/2	34 x 4
Republic	11 1/2	1775	4-3 1/2 x 5	34 1/2	34 1/2	34 x 5
Republic	12	2150	4-1 1/2 x 5	34 1/2	34 1/2	34 x 6
Republic	T 3 1/2	3450	4-1 1/2 x 5	36 1/2	36 1/2	36 x 5 1/2
Republic	V 6	4750	4-1 1/2 x 5	36 1/2	36 1/2	40 x 6 1/2
Rays	1	995	4-3 1/2 x 4	31 1/2	31 1/2	31 x 4
Riker	3	4-1 1/2 x 5	36 1/2	36 1/2		
Riker	4	4-1 1/2 x 5	36 1/2	36 1/2		
Rows	CDW 2	3000	4-1 1/2 x 5	34 1/2	34 1/2	36 x 3 1/2
Rows	CDW 3 1/2	3250	4-1 1/2 x 5	34 1/2	34 1/2	36 x 4 1/2
Rows	DEW 3 1/2	3800	4-1 1/2 x 5	36 1/2	36 1/2	36 x 5 1/2
Rows	FW 5	4900	4-1 1/2 x 5	36 x 6	36 x 6	40 x 6 1/2
Rush	D 1	895	4-3 1/2 x 5	31 1/2	31 1/2	31 x 4
Sandow	G 1	2050	4-3 1/2 x 5	34 1/2	34 1/2	34 x 5

## MERCHANDISIN

THE tables which appeared with the thought merchandising of passenger The data have been limited salesman finds necessary for sales ammunition.

The tables will be correct every week.

They will be supplemented intended solely for the garage the maintenance of passenger as his work.

Name and Model	Tons Capacity	Classified Price	Cylinder Range	F. R.	TIRES
Mack	AB 1	2400	4-4 1/2	36x4	36x3 1/2
Mack	AB 1	2400	4-4 1/2	36x4	36x3 1/2
Mack	AB 1	2900	4-4 1/2	36x4	36x3 1/2
Mack	AB 1	2900	4-4 1/2	36x4	36x3 1/2
Mack	AB 2	3000	4-4 1/2	36x4	36x4 1/2
Mack	AB 2	3000	4-4 1/2	36x4	36x4 1/2
Mack	AB 3	4000	4-4 1/2	36x4	36x4 1/2
Mack	AC 3	4000	4-4 1/2	36x4	36x4 1/2
Mack	AC 5	4250	4-5 1/2	36x4	40x4 1/2
Mack	AC 7	5500	4-5 1/2	36x4	40x4 1/2
Mack	AC 7	5500	4-5 1/2	36x4	40x4 1/2
Mack Tractor	AB 5	3100	4-4 1/2	36x4	36x4 1/2
Mack Tractor	AC 7	4000	4-4 1/2	36x4	36x4 1/2
Mack Tractor	AC 11	5500	4-5 1/2	36x4	40x4 1/2
Mack Tractor	AC 15	5500	4-5 1/2	36x4	40x4 1/2
Manly	30 1 1/2	2050	4-3 1/2	36x4	36x4
Manly	40 2	2350	4-3 1/2	36x4	36x4
Manly	50 2 1/2	2600	4-3 1/2	36x4	36x4
Master	M 2	2300	4-1 1/2	34x4	36x4
Master	O 2	2400	4-1 1/2	34x4	36x4
Master	A 3	2800	4-1 1/2	36x4	36x4
Master	W 2	2800	4-1 1/2	36x4	36x4
Master Tractor	T 6	2650	4-1 1/2	34x4	36x4
Maxell	25 1	1085	3-1 1/2	30x3 1/2	30x3 1/2
Maxell	25 1	1085	3-1 1/2	32x3 1/2	32x3 1/2
Menominee	H 1 1/2	1775	4-3 1/2	34x3 1/2	34x3 1/2
Menominee	H 1 1/2	2350	4-3 1/2	36x3 1/2	36x3 1/2
Menominee	D 3	2715	4-4 1/2	36x4	36x4
Menominee	G 3 1/2	3350	4-4 1/2	36x4	36x4
Menominee	J 5	4570	4-3 1/2	36x4	36x4
Merland	17-N 1	2175	4-3 1/2	34x3 1/2	34x3 1/2
Merland	17-B 1 1/2	2830	4-4 1/2	36x3 1/2	36x3 1/2
Merland	17-O 2 1/2	3300	4-4 1/2	36x3 1/2	36x3 1/2
Merland	17-G 4	4500	4-4 1/2	36x4	36x4
Merland	17-J 5	5000	4-4 1/2	36x4	36x4
Mustogen	29 2	2325	4-4 1/2	36x4	36x4
Nash	29 1 1/2	1650	4-3 1/2	34x3 1/2	34x3 1/2
Nash	40 1 1/2	2350	4-4 1/2	36x3 1/2	36x3 1/2
Nash	50 1 1/2	2175	4-3 1/2	34x4	34x4
Nelson & LaMoine	E 1 1/2	1700	4-3 1/2	36x3 1/2	36x3 1/2
Nelson & LaMoine	E 2	2250	4-4 1/2	36x4	36x4
Nelson & LaMoine	E 3	2950	4-4 1/2	36x4	36x4
Nelson & LaMoine	E 5	3750	4-4 1/2	36x4	36x4
Nelson & LaMoine	E 5	3750	4-4 1/2	36x4	36x4
Netco	H 2	2800	4-4 1/2	36x4	36x4
Netco	D 2	2800	4-4 1/2	36x4	36x4
Niles	B 1	1500	4-3 1/2	35x3 1/2	35x3 1/2
Niles	E 2	2400	4-4 1/2	36x4	36x4
Noble	NW 2 1/2	2675	4-4 1/2	36x4	36x4
Old Hickory	M 1	995	4-3 1/2	33x4	33x4
Old Reliable	1 1/2	2350	4-4 1/2	34x3 1/2	34x3 1/2
Old Reliable	2	3250	4-4 1/2	34x4	34x4
Old Reliable	3	4000	4-4 1/2	34x4	34x4
Old Reliable	5	5000	4-4 1/2	36x4	36x4
Old Reliable	5	5000	4-4 1/2	36x4	36x4
Old Reliable	7	6000	4-5 1/2	36x4	36x4
Onida	A 1	2200	4-3 1/2	36x3 1/2	36x3 1/2
Onida	B 1 1/2	2600	4-3 1/2	36x3 1/2	36x3 1/2
Onida	C 2	3000	4-4 1/2	36x4	36x4
Onida	D 3	3700	4-4 1/2	36x4	36x4
Onida	E 5	4750	4-5 1/2	36x4	36x4
Overland	Panel Express	975	4-3 1/2	31x4	31x4
Overland	Panel Express	1015	4-4 1/2	33x4 1/2	33x4 1/2
Packard	1-E 1	2650	4-4 1/2	34x3 1/2	34x3 1/2
Packard	1-E 1 1/2	3000	4-4 1/2	34x4	34x4 1/2
Packard	2-E 2	3400	4-4 1/2	34x4	34x4 1/2
Packard	3-E 3	4100	4-4 1/2	36x4	36x4 1/2
Packard	4-E 4	4450	4-4 1/2	36x4	36x4 1/2
Packard	5-E 5	5150	4-5 1/2	36x4	36x4 1/2
Packard	6-E 6	5400	4-5 1/2	36x4	36x4 1/2
Packard	7-E 7	599	4-5 1/2	36x4	36x4 1/2

## MERCHANDISING SPECIFICATIONS

THE tables which appear on these pages have been prepared with the thought of assisting the salesman in the merchandising of passenger cars and commercial vehicles. The data have been limited to those facts which the average salesman finds necessary for comparative purposes and as sales ammunition.

The tables will be corrected and revised down to date every week.

They will be supplemented by others from week to week, intended solely for the garageman and repairman who has the maintenance of passenger cars and commercial vehicles as his work.

Passenger  
Cars

## MOTOR WORLD GUIDE

Passenger  
Cars

Model	Motor	Ignition	WB	Tires	Rims	2- Pass.	5- Pass.	7- Pass.	Starting Lighting	Model	Motor	Ignition	WB	Tires	Rims	2- Pass.	5- Pass.	7- Pass.	Starting Lighting
ALIEN Series 41	4-3125	Conn	A-Lite	112	32x3 1/2	SS	19145	\$1195	....	GRANT G	6-3 24 1/2	Remy	Wagner	114	32x3 1/2	....	\$1245	1245	....
AMERICAN B	6-3125	A-Kent	West	122	32x4	SS	1645	1695	1695	HARROUN C	4-3125 1/2	A-Kent	Remy	106	30x3 1/2	....	995	....	....
ANDERSON 60-F	6-3125 1/2	Conn	Wells	120	32x4	SS	**1485	....	....	HAYNES 39	6-3125	Remy	L-N	127	32x4 1/2	SS	11850	1900	1949
APPENSON 8-18	6-3125	Remy	Wells	120	32x4	SS	**1925	....	....	44	12-2 1/2	Delco	L-N	127	32x4 1/2	SS	2010	....	2910
Autumnary	8-3125	Remy	Wells	130	32x4 1/2	SS	12850	....	2800	HOLLIER 188	6-3124 1/2	Remy	Spitfire	116	32x4	SS	1485	....	....
Autumnary	6-3125	Remy	Wells	120	32x4 1/2	SS	12850	....	4000	188	6-3 24 1/2	A-Kent	Spitfire	116	32x4	SS	11855	1385	....
B-4-24	6-3125 1/2	Delco	Wells	131	32x4 1/2	SS	....	1785	1785	HUDSON Super 4	6-3125	Delco	Wells	125 1/2	32x4 1/2	SS	12200	2200	....
B-4-4	6-3125 1/2	Delco	Wells	131	32x4 1/2	SS	....	1785	1785	HUPMOBILE	4-3125 1/2	A-Kent	Wells	112	32x4	....	1500	1500	....
BIDDLE H	4-3125 1/2	Wells	G & D	121	32x4	QD	2700	....	12750	JACKSON 349	6-3 23 1/2	A-Lite	A-Lite	118	32x4	SS	11495	1495	1570
BRISCOE B4-24	4-3125 1/2	Conn	A-Lite	104	30x3 1/2	C	885	885	....	JORDAN 140	6-3125 1/2	Delco	Wells	127	32x4 1/2	SS	1775	2775	....
BUICK E4-34-35	4-3124 1/2	Delco	Wells	106	31x4 1/2	C	795	795	....	KING F	6-3 25	A-Kent	Wells	120	32x4	SS	....	2370	....
BUICK E4-45	6-3124 1/2	Delco	Wells	118	32x4	SS	1265	1265	....	KISSEL 100-74	6-3125	Remy	Wells	117	32x4	SS	11044	1644	1644
E-40	6-3124 1/2	Delco	Wells	124	32x4 1/2	SS	....	1495	....	100-74	12-2 1/2	Delco	Wells	128	32x4 1/2	....	2550	....	....
CADILLAC 67	8-3125 1/2	Delco	Wells	125	32x4 1/2	SS	3520	3520	3520	LEXINGTON 6-8	6-3124 1/2	Conn	Wells	116	32x4	QD	1485	1585	....
CASE U	6-3125 1/2	Wells	Wells	125	32x4 1/2	SS	11875	1875	1875	LIBERTY 10-3	6-3124 1/2	Delco	Wells	115	32x4	QD	1570	1570	1570
CHALMERS 6-30	6-3124 1/2	Remy	Wells	117	32x4	SS	1565	1565	....	LOCOMOBILE E-38	6-4125	Delco	Wells	129	37x5	QD	15700	5500	5500
CHANDLER 6-30	6-3124 1/2	Remy	Wells	117	32x4	SS	1565	1565	....	E-48	6-4125 1/2	Delco	Wells	129	37x5	QD	15700	5500	5500
CHEVROLET 190	6-3125	Wells	Wells	122	32x4	SS	11795	11875	1795	LOZIER 84	4-4124 1/2	Boech	G & D	120	30x4 1/2	SS	....	1695	....
FA D	4-3124 1/2	Remy	A-Lite	102	30x3 1/2	C	715	735	....	84	6-3125	Boech	G & D	120	30x4 1/2	SS	....	3250	....
FA D	4-3124 1/2	Remy	A-Lite	108	32x4	SS	995	995	....	MADISON 82	6-3125	Boech	G & D	120	30x4 1/2	SS	....	1695	....
FA D	4-3124 1/2	Remy	A-Lite	108	32x4	SS	11550	1585	....	82	6-3125	Boech	G & D	120	30x4 1/2	SS	....	1695	....
COLE 870	8-3124 1/2	Delco	Wells	127	32x4 1/2	SS	2595	2595	2595	MAIBOHM B	6-3125	Remy	Wells	124	32x4	SS	11485	1485	1485
COLUMBIA CAD	6-3124 1/2	A-Kent	W-Land	115	32x4	....	11595	1550	....	MARMON 34	6-3124 1/2	Boech	Wells	115	32x3 1/2	SS	1290	1290	1290
CROW-ELKHART CE-36	4-3125	Conn	Dyneto	114	32x3 1/2	SS	1095	1155	1095	MAXWELL 25	4-3124 1/2	A-Kent	Wells	136	32x4 1/2	QD	13750	3700	3750
DANIELS B	8-3125	Wells	Wells	127	32x4 1/2	QDR	3500	3500	3500	McFARLAN 25	6-4125	Magneto	Wells	136	32x4 1/2	QD	13750	3700	3750
DAVIS H. I.	6-3124 1/2	Delco	Wells	119	32x4	....	1855	1855	....	MERCER Series 4	4-3124 1/2	Boech	U.S.L.	132	32x4 1/2	QD	14000	4000	....
H. I.	6-3124 1/2	Delco	Wells	119	32x4	....	1855	1855	....	MITCHELL D-40	6-3125	Remy	Wells	120	32x4	SS	1465	1465	....
DIXIE FLYER 1835	4-3125	Conn	Dyneto	112	32x3 1/2	SS	1095	1095	....	C-42	6-3125	Remy	Wells	127	32x4	SS	1465	1465	....
DODGE BROTHERS 4-3124 1/2	4-3124 1/2	Wells	N.E.	114	32x3 1/2	SS	985	985	....	MOLINE-KNIGHT G	4-3125	Conn	A-Lite	118	32x4	SS	1735	1735	....
DORRIS 6-80	4-3125	Wells	Wells	132	32x5	SS	....	3400	....	MONROE M-3	4-3125	Conn	A-Lite	118	32x4	SS	1735	1735	....
DORT 11	4-3125	Wells	Wells	132	32x5	SS	....	3400	....	M-3	4-3125	Conn	A-Lite	118	32x4	SS	1735	1735	....
ELCAR D.F.	4-3125	Wells	Wells	132	32x5	SS	....	3400	....	MOON 6-36	6-3124 1/2	Delco	Wells	114	32x3 1/2	SS	1485	1485	....
ELGIN H	6-3124 1/2	Remy	Wells	118	32x4	SS	1185	1295	....	6-36	6-3124 1/2	Delco	Wells	114	32x3 1/2	SS	1485	1485	....
EMPIRE 50-51	4-3125	Conn	A-Lite	115	32x4	SS	1165	1125	....	MURRAY 6-46	6-3125 1/2	Delco	Wells	125	32x4 1/2	SS	2500	2500	2500
72	6-3124 1/2	Conn	A-Lite	120	32x4	SS	1445	1475	....	NASH 687	6-3125	Delco	Wells	128	32x4 1/2	....	2800	2800	2800
ESSIE 73	6-3124 1/2	Conn	A-Lite	120	32x4	SS	1445	1475	....	687	6-3125	Delco	Wells	128	32x4 1/2	....	2800	2800	2800
ESSIE 73	6-3124 1/2	Conn	A-Lite	120	32x4	SS	1445	1475	....	687	6-3125	Delco	Wells	128	32x4 1/2	....	2800	2800	2800
FORD A	4-3125	Wells	Wells	106 1/2	32x4	....	....	1395	....	NATIONAL Six	6-3125 1/2	Delco	Wells	128	32x4 1/2	QDR	12450	2450	2450
FORD T	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	Twelve	12-2 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	OAKLAND 34-B	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	34-B	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	OLDMOBILE 45-A	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	45-A	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR	13150	3150	3150
FRANKLIN 9	4-3124	Wells	Wells	106 1/2	32x4	....	....	1395	....	37	6-3124 1/2	Delco	Wells	128	32x4 1/2	QDR			



# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 5

PUBLISHED WEEKLY AT 237 WEST 39th STREET  
NEW YORK, OCTOBER 30, 1918

Fifteen cents a copy  
Two dollars a year

## Champion Dependable Spark Plugs

Look for the Name "Champion" on  
the Porcelain as well as on the Box

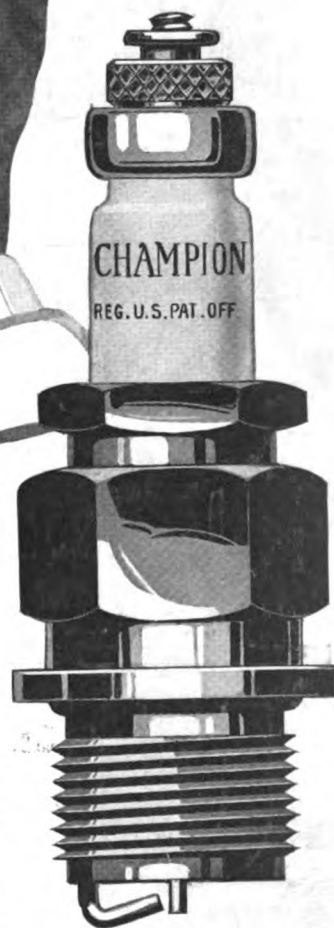


**B**UYERS of Spark Plugs for every type of motor car, motor truck (stationary, tractor, motorcycle and motor boat) engines have been educated to avoid substitution by looking for the name "Champion" on the porcelain.

The wise dealer who takes advantage of this condition does a larger volume of business.

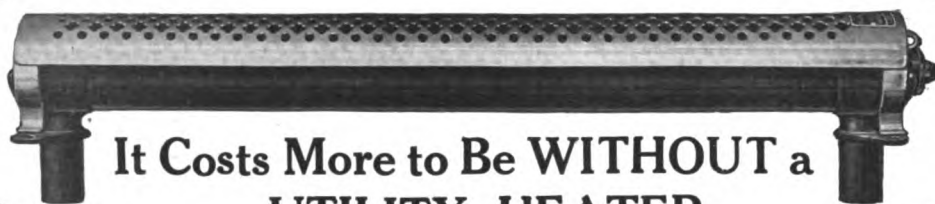
He has a steadier trade, and as a result makes more profit. It is easier to sell Champion Spark Plugs and to sell more of them because of the public demand for them.

You protect yourself, as well as your customers, when you recommend spark plugs with the name "Champion" on the porcelain.



Champion  
7-8 18  
Price \$1.00

Champion Spark Plug Company, Toledo, Ohio  
Champion Spark Plug Co., of Canada, Limited, Windsor, Ont.



## It Costs More to Be WITHOUT a UTILITY HEATER



Cold feet—cold all over—cold in the head—continuous, nagging discomfort—bad temper—lowered efficiency. These are a few things a cold passenger car or truck costs.

*Truck Manufacturers:* Utility Heaters are humane. Think of the man who drives the truck winter in and out. Make the Utility standard or at least optional equipment. Write us.

### A Model For Every Car

Utility Protected Heater for all enclosed 5 or 7 passenger cars. Price \$20.00.  
Utility Front Seat Heater for roadsters, driving compartments of large cars and trucks. Price \$12.50.

Utility, Jr., Protected Heater for Fords and other small cars. Price \$9.00.  
Utility De Luxe Protected Heater for 8-cylinder cars. Price \$25.00.

Handled by good dealers everywhere.

Dealers: Stock from your jobber. Get your share of heater business this next six months.

## HILL PUMP VALVE CO.

*Mfrs. of UTILITY Products*

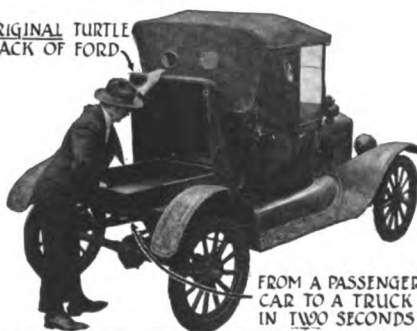
Archer Ave. and Canal St., Chicago

Sales Department

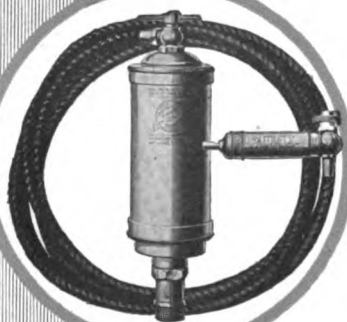
THE ZINKE CO., 1323 S. Michigan Ave., Chicago

UTILITY DISAPPEARING TRUCK BODY  
FOR FORDS. PRICE \$38.50.

ORIGINAL TURTLE  
BACK OF FORD



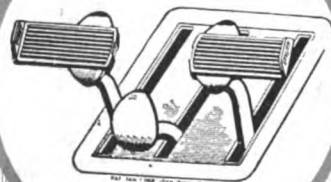
FROM A PASSENGER  
CAR TO A TRUCK  
IN TWO SECONDS



UTILITY PUMPS  
for All Cars  
\$12.00.  
For Fords \$7.50



UTILITY RIM  
Wrench for All Cars  
\$1.75



UTILITY PEDALS  
for Fords \$1.25



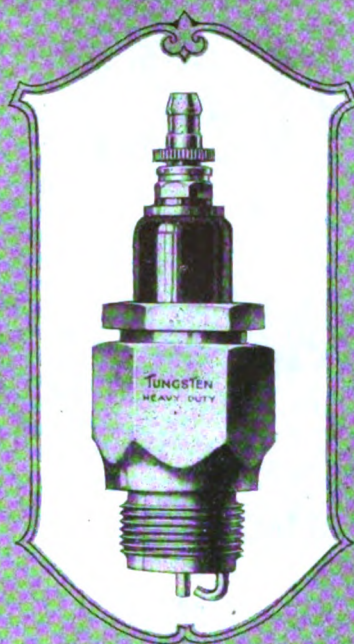
UTILITY  
UNIVERSAL  
Wrench for All Cars  
\$3.50

# UTILITY

## Automotive Products



# SERVICE



**TUNGSTEN**  
TRADE MARK REGISTERED  
**SPARK PLUG**  
**Always on the job**



**TUNGSTEN MFG. CO.**  
MARSHALLTOWN IOWA





SIX MILLION LETTERS from men in the American Expeditionary Forces were brought to this country recently by a French Steamship!

*"There is now a Fisk Tire  
for every motor vehicle that rolls."*

**M**MOTOR TRUCKS are more essential in the handling of Uncle Sam's mail than ever before.

"SPEED UP" has been the business slogan to win the war.

THE DELIVERY of mail with the greatest despatch has been accomplished only with the assistance of the motor truck.

DELAYS are disastrous! Dependable tires prevent delays and give uninterrupted service.

FISK SOLID TIRES are dependable—full of brute strength. When you need Solid Tires—buy Fisk.

# FISK SOLID TIRES

To Tire Dealers: Write at once to The Fisk Rubber Company of N. Y., Chicopee Falls, Mass., Dept. J, and get full information about Fisk Solids and the liberal Fisk Dealer proposition

When writing advertisers please mention Motor World—it identifies you

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

The Class Journal Co.

U. F. G. Building, 281-241 West 39th Street, New York City  
 Horace M. Swetland, President  
 W. L. Ralph, Vice-President B. M. Corey, Treasurer  
 A. B. Swetland, General Manager

Business Department  
 Charles B. Shanks, Manager

Editorial Department  
 David Beecroft, Directing Editor  
 Kay W. Sherman, Editor  
 Stanley E. McMinn, Managing Editor  
 J. Howard Pile

## Branch Offices

Chicago—Mallory Bldg., 59 East Madison St., Phone Randolph 6960  
 Detroit—95 Fort Street, West, Phone Main 1851  
 Cleveland—Guardian Bldg., Phone Main 1143

Subscription, Per Annum (Postage Paid).....\$2.00  
 Foreign and Canadian Subscriptions.....4.00  
 Single Copies (Postage Paid).....10 Cents

## Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the date of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to Motor World.

Cable Address, "MOTORWORLD," New York

Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 348 West 39th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. G. Pearson, Secretary.

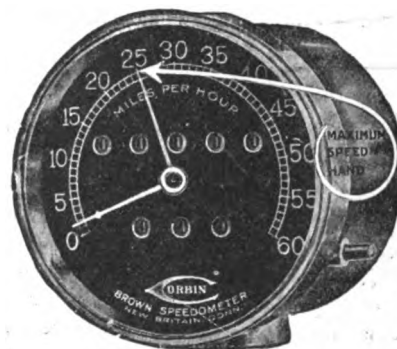
Member of the Audit Bureau of Circulations  
 Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

What the N. A. D. A. Has Done.....	9
The Tractor Future .....	10
A Combination Truck and Trailer Business....	12
Reilly and the Selective Draft.....	15
Winter Business .....	16
Be a Live Farm Light Dealer.....	18
What the Dealer Must Do to Sell Industrial Tractors .....	21
Better Mechanics .....	22
Repairshop Shortcuts .....	24
Editorial .....	26
Letters from Readers .....	27
The Law .....	29
Retail News .....	30
Automotive Equipment.....	32
Regular News Department.....	33
Coming Events .....	41

Advertisers' Index on Pages 104-105

## Reasons for CORBIN-BROWN SPEEDOMETER Supremacy



### 3. Durability

Corbin-Brown durability is due chiefly to the use of high-grade materials throughout all parts of the mechanism, but it is increased materially by the policy of making each moving part a little heavier and stronger than need be for the work it has to do. Thus a period of wear which would derange an ordinary speedometer leaves the Corbin-Brown working as accurately and smoothly as when first installed.

The Corbin-Brown drive gears, for example, are exceptionally heavy and strong. They have the hardest work to do, and they are built to accomplish it flawlessly. Extra strength and wearing ability are obtained by making the gears and shaft in one piece, an exclusive Corbin process.

Further durability is found in the link cable. It is almost unbreakable, but if a repair should be found necessary, a new link can be easily inserted by anyone.

The instrument proper, as has previously been pointed out, employs the fewest possible parts, and they are all amply strong. It has always been the aim of the Corbin Company not only to provide speedometer accuracy, but to make that accuracy lasting by giving utmost durability in each detail of construction.

The Corbin-Brown catalog describes all the special features, including the Maximum Speed Hand, which registers your highest speed and remains at that point until you reset it to zero. Write for your copy today.

## Corbin Screw Corporation

American Hardware Corporation, Successor  
 NEW BRITAIN, CONN.

BRANCHES: New York Chicago Philadelphia





# Sandusky Distributorships Are Going Fast

You, too, can make a Profit on  
This Account

## An Appreciation

One Sandusky Distributor said to a prospective distributor:

"I think well enough of The Sandusky Tractor and the organization back of it to have sold 25 of these machines to my own brother on a sub-dealer contract" Name and address upon request.)

Recent announcement that Sandusky Tractors would be merchandised in the future through Distributors instead of our former Branch House Organization brought an immediate response from many of the leading Automobile Distributors.

Sandusky Tractors are very well known throughout the country. They have been backed during the past six years by the greatest advertising campaign ever put behind a tractor in the leading agricultural publications.

Their design, while original, is a proven success, and every item entering into their manufacture in our own plant has stood the test of gruelling service in the hands of thousands of farmers. It was these users who long ago proclaimed the Sandusky "America's Foremost Quality Tractor."

Excellent production facilities enable us to supply a satisfactory volume to a number of good distributors in addition to the following live wires:

C. B. Cook, Newark, N. J.	Fohler Bros. & Dutton, Omaha, Neb.	Davenport-Wheeler-Allen Co., Riverside, Cal.
Rice Motors Co., Tallimore, Md.	Waterman Reo Sales Co., Fort Dodge, Iowa.	Hogbe-Kellogg Co., Ventura, Cal.
M. D. Stone Motor Co., Richmond, Va.	More Bros. Corporation, Minneapolis, Minn., and Fargo, N. D.	Sandusky Tractor Co., Stockton, Cal.
E. F. Craven, Greensboro, N. C.	H. & L. Motor Sales Co., Mitchell, S. Dak.	Corecco Bros., Reno, Nevada.
Florida Tractor & Implement Co., West Palm Beach, Fla.	Okeene Auto Co., Okeene, Okla.	Northes' Auto Co., Portland, Oregon.
Chas. W. Tray Co., Amana, Ia.	Phoenix Motor Co., Phoenix, Ariz.	Sandusky Tractor Co., Lewiston, Mont.
Bricoe Motor Sales Co., St. Louis, Mo.	Sandusky Tractor Co., Los Angeles, Cal.	The Central Motor Sales Co., Dayton, Ohio.
The W. C. Howard Motor Sales Co., Kansas City, Mo.	C. F. Correll, San Jose, Cal.	

Quick action will enable you to cash in on the fall selling season, as well as develop and train your organization for a big volume of business during the coming winter and spring.

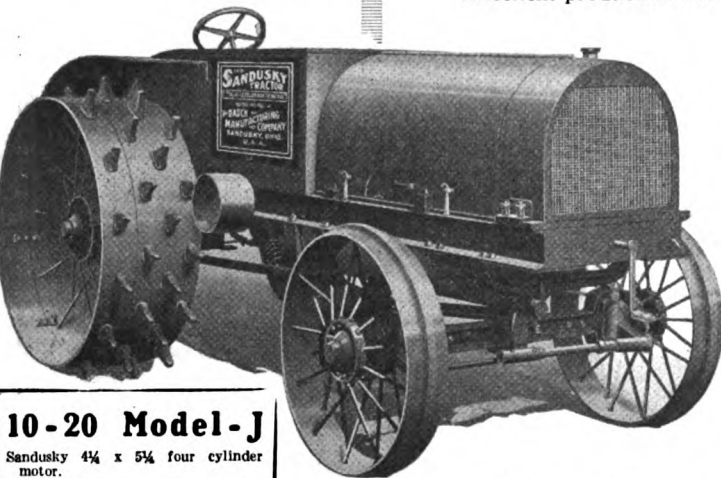
There is no better time of the year to get lined up on this proposition than RIGHT NOW.

We advise telegraphic territory reservation.

## The Dauch Mfg. Company

SANDUSKY, OHIO, U. S. A.

**Dealers:** Take this up with your distributors at once or make application direct.



## 10-20 Model-J

Sandusky  $4\frac{1}{4}$  x  $5\frac{1}{4}$  four cylinder motor.

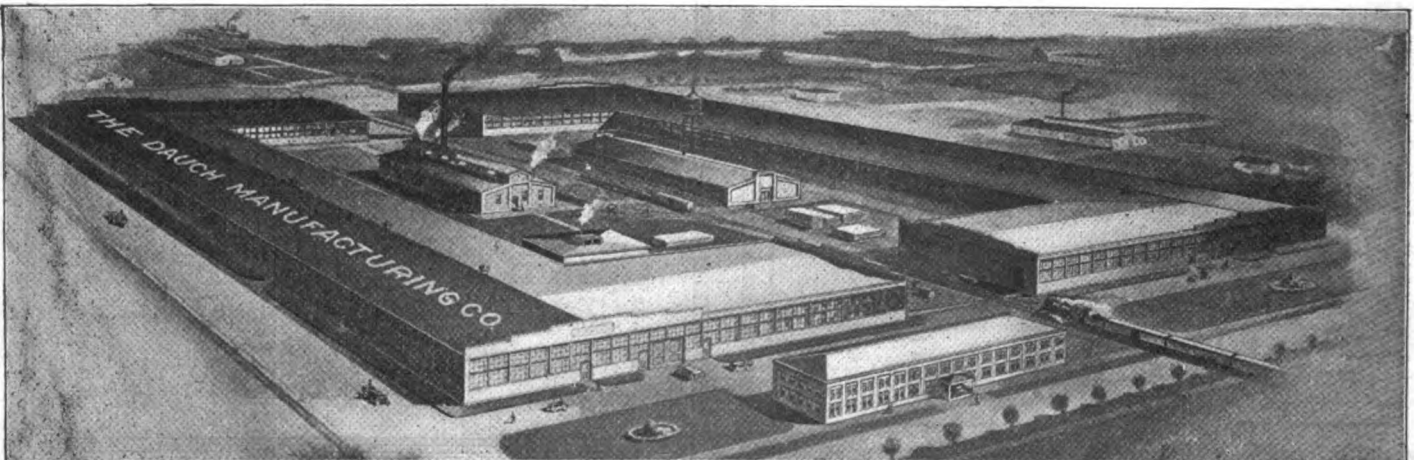
Sandusky Three Speed Transmission, equipped with Hyatt Roller and SKF Swedish Ball Bearings.

Famous Timken Worm and Gear Drive—direct on low.

Wheel base 76 inches; weight, 4,080 pounds.

Protection throughout against sand and grit.

**GUARANTEED KEROSENE OR DISTILLATE BURNER.**



When writing advertisers please mention Motor World—it identifies you



## Who Should Sell Unit Power and Lighting Systems to the Farmer?

Out on Long Island, eighty miles from New York City, there lives a farmer who bought a lighting outfit from a New York City sales agent.

A factory man superintended the installation and started it properly—then went on his way.

Sixty days later something went wrong with the speed regulator and the motor would not function properly.

The farmer asked the city sales agent to send some one who could make the necessary repair. The sales agent sent an S. O. S. to the factory—because he was only a sales agent and knew nothing about service.

Thirty days rolled by and no factory service man had yet appeared. But a good mechanic from any one of the five automotive garages in the little town four miles from the farm could have rendered the necessary service. Finally one of them did. It only meant about fifteen minutes' work by an average good automobile mechanic.

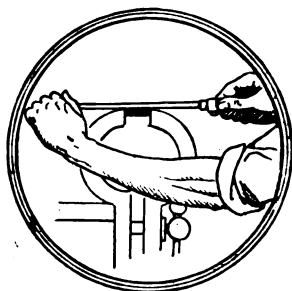
The farmer liked his unit power and lighting system, and it was a good system, but—

•

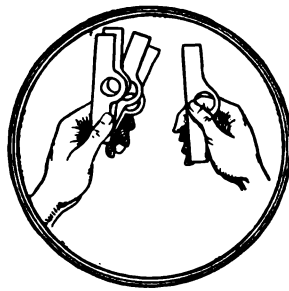
Manufacturers of unit power and lighting systems can well afford to take advantage of automotive sales and service stations in every part of the country. They constitute a made-to-order organization for economical sales, distribution and effective follow-up service.

# SHIMS

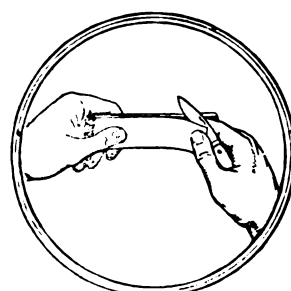
**MADE WITHOUT EFFORT**



**No filing, which means costly labor saved.**



**No assembling, which means conservation of time.**



**Just peel off layers of brass and the job is done.**

LAMINUM has superseded old-fashioned, out-of-date shims. Adjustments are easily accomplished and surface is always accurate—**smooth as glass!** The surest way to cut costs and speed production is to use LAMINATED SHIMS.

STOCK SHIMS for: Ford, Chevrolet Four-ninety, Continental 7-W, Continental 7-N, Maxwell, Overland, Dodge

**LAMINATED SHIM COMPANY, 533 Canal St., New York**

DETROIT: Dime Bank Building. ST. LOUIS: Mazura Mfg. Co.  
ENGLAND: R. A. Rothernel, 6 Great Marlboro St., London, W.

# LAMINUM

*The* **MATERIAL** *for* **SHIMS**

# MOTOR WORLD

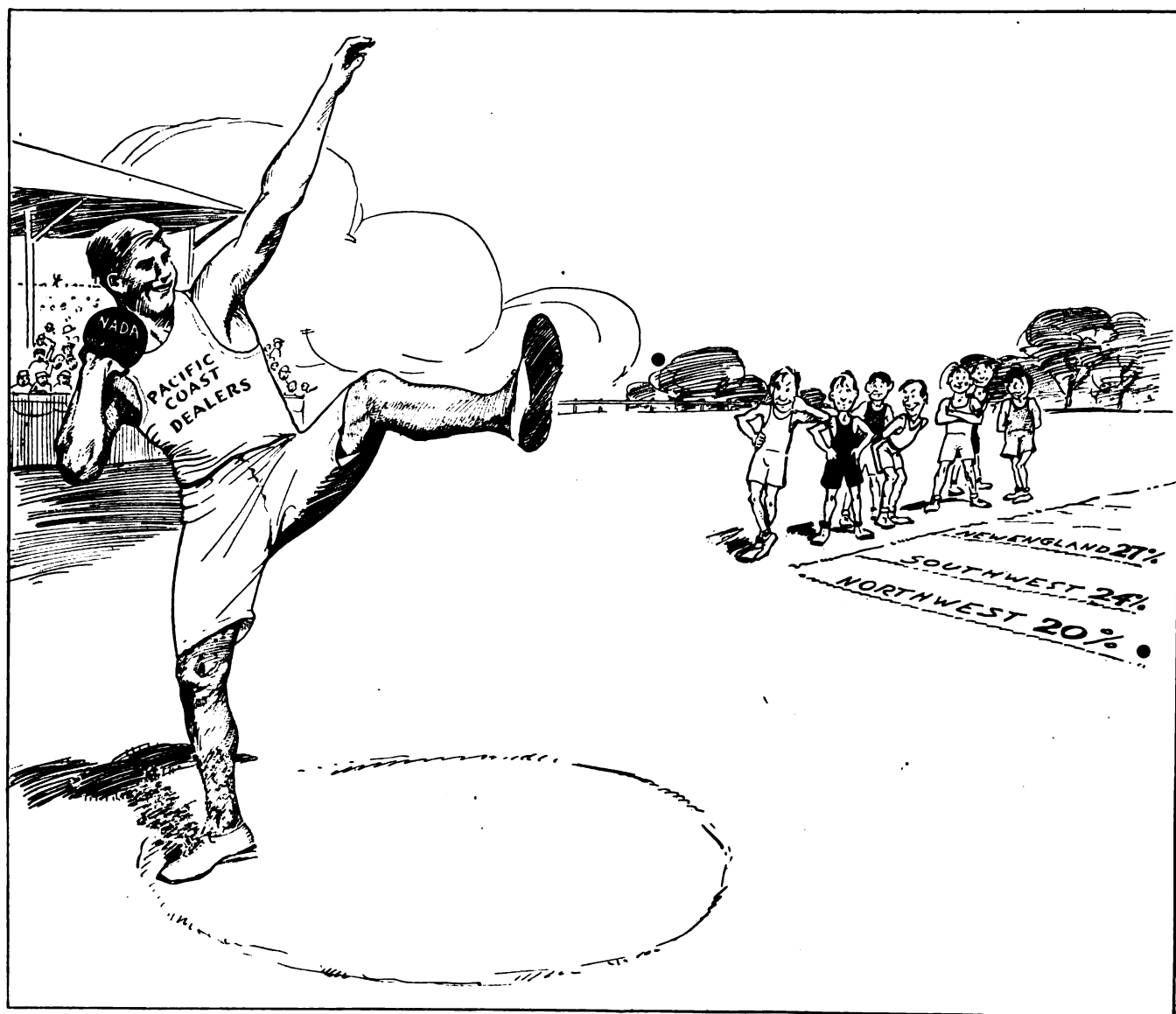
for  
DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, October 30, 1918

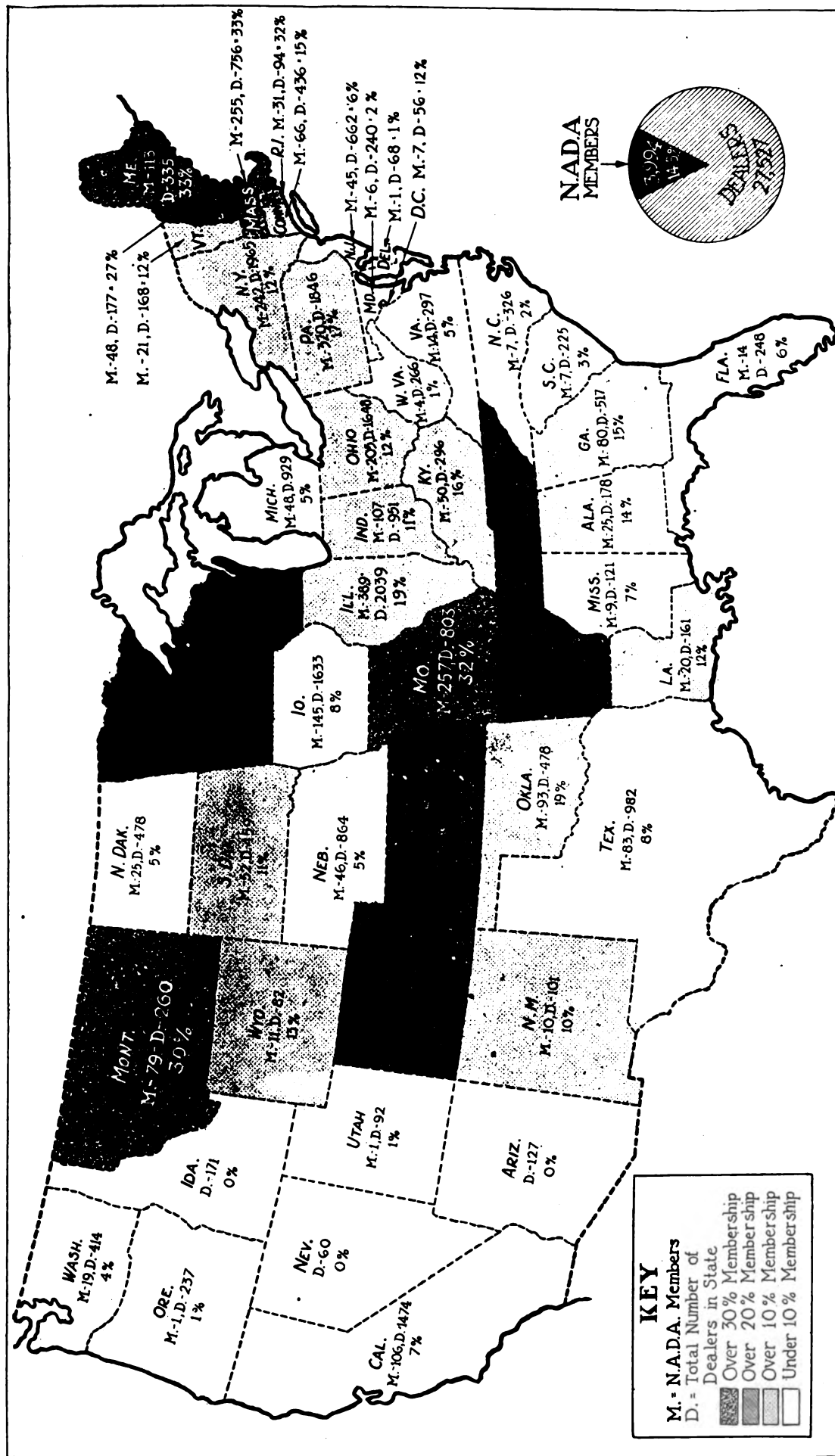
No. 5

## How Far Can He Throw?



The six New England states gave the National Automobile Dealers' Association 27 per cent of their dealers as members. The four southwest states—Missouri, Kansas, Oklahoma and Texas—gave 24 per cent. The four northwest states—Minnesota, North and South Dakota and Montana—gave 20 per cent. In the campaign now opening on the Pacific Coast, the six states of California, Oregon, Washington, Idaho, Nevada and Arizona must give 671 members to equal New England. To make 30 per cent they must give 745. And if California wants to beat Massachusetts and Maine, which now lead with 33 per cent, she must give 501 members. What will the Coast do?

# *This Map of N. A. D. A. Membership Will Be a Surprise to Some Dealers*



Real strength consists in proportion of members to the trade population. It is not essentially gross numbers—yet gross numbers count. Massachusetts and Maine have given the N.A.D.A. 33 per cent of their dealers as members. New England, relatively, is the strongest region for the N.A.D.A. despite the fact that some people have thought this was a "western" organization. The "M" on the map means members, the "D" the number of dealers in the state, and the "q" the extent to which states have realized their maximum possibilities. Are there some dealers in your state who ought to be supporting the N.A.D.A.? Have you done your bit?



# What the N. A. D. A. Has Done

*To Build Up a Membership in Three Months and*

## What You Ought to Do

*To Help It Be the Biggest and Best Trade Organization in the World*

**A**BOUT three months ago the National Automobile Dealers' Association determined that if it were ever going to amount to anything it must make itself a real organization. It was a question of make it grow or kill it.

Wherefore, E. E. Peake was engaged as executive secretary to put over a membership campaign and see if the organization couldn't be given the numerical strength it needed.

When the campaign started there were 936 members. Since that time 3058 have been added, giving a total of 3994, which is 14½ per cent of the 27,527 dealers in the United States.

The campaign has been conducted intensively in several distributing areas, such as New England, the Northwest, Southwest and others. The South has not been covered as a territory, but will

be soon. A campaign is just opening on the Pacific Coast. The total membership should run considerably above the 5000 mark set at the start.

In this campaign President F. W. A. Vesper and Executive Secretary E. E. Peake have traveled thousands of miles and have told to many meetings the story of the N. A. D. A. *Enthusiasm and support have always followed these addresses.*

Through it all the N. A. D. A. has been working for the interests of the dealers. It has gone to Washington with delegations on occasion and has done good work. It isn't saying much about it, yet but it had considerable to do with the cut from 10 to 5 per cent that was made in the Senate on the tax on car sales.

*It is quietly but effectively working all the time.*

If YOU are one of the dealers who hasn't joined yet send a letter of application and a check for \$15 to Executive Secretary E. E. Peake at 909 Gloyd Building, Kansas City.

If you are a distributor find out how many of your dealers have not joined and get the memberships of those who are not now members.

If you are a member get another member—and then some.

If you are not a member ask yourself: "Have I a right to take the benefits that the N. A. D. A. is getting for me at Washington and elsewhere when I am not helping support the men who are working for me?"

Don't let your reason for not coming in be that you haven't \$15. You probably don't believe it yourself.

**NOW—WHAT ABOUT IT?**

### Total N. A. D. A. Members

1—Illinois	389
2—Pennsylvania	320
3—Minnesota	298
4—Missouri	257
5—Massachusetts	255
6—New York	242
7—Wisconsin	232
8—Kansas	205
9—Ohio	205
10—Iowa	145
11—Maine	113
12—Indiana	107
13—California	106
14—Oklahoma	93
15—Colorado	85
16—Texas	83
17—Georgia	80
18—Montana	79
19—Connecticut	66
20—Arkansas	60
21—S. Dakota	52
22—Tennessee	52
23—Kentucky	50
24—Michigan	48
25—New Hampshire	48
26—Nebraska	46
27—New Jersey	45
28—Rhode Island	31
29—Alabama	25
30—N. Dakota	25
31—Vermont	21
32—Louisiana	20
33—Washington	19
34—Florida	14
35—Virginia	14
36—Wyoming	11
37—New Mexico	10
38—Mississippi	9
39—District of Columbia	7
40—N. Carolina	7
41—S. Carolina	7
42—Maryland	6
43—W. Virginia	4
44—Delaware	1
45—Oregon	1
46—Utah	1

3994

### Total Dealers in U. S.

1—Illinois	2039
2—New York	1965
3—Pennsylvania	1846
4—Ohio	1648
5—Iowa	1633
6—California	1474
7—Minnesota	1064
8—Wisconsin	1052
9—Texas	982
10—Kansas	959
11—Indiana	951
12—Michigan	929
13—Nebraska	864
14—Missouri	803
15—Massachusetts	756
16—New Jersey	662
17—Georgia	517
18—N. Dakota	478
19—Oklahoma	478
20—S. Dakota	459
21—Connecticut	436
22—Washington	414
23—Colorado	392
24—Maine	335
25—N. Carolina	328
26—Virginia	297
27—Kentucky	296
28—W. Virginia	266
29—Montana	260
30—Florida	248
31—Maryland	240
32—Arkansas	238
33—Oregon	237
34—Tennessee	229
35—S. Carolina	225
36—Alabama	178
37—New Hampshire	177
38—Idaho	171
39—Vermont	168
40—Louisiana	161
41—Mississippi	121
42—New Mexico	101
43—Rhode Island	94
44—Utah	92
45—Wyoming	82
46—Delaware	68
47—Nevada	60
48—District of Columbia	56

27,527

### Percentage of Dealers Who Are Members

1—Massachusetts	33
2—Maine	33
3—Rhode Island	32
4—Missouri	32
5—Montana	30
6—Minnesota	28
7—New Hampshire	27
8—Arkansas	25
9—Tennessee	23
10—Wisconsin	22
11—Colorado	21
12—Kansas	21
13—Illinois	19
14—Oklahoma	19
15—Pennsylvania	17
16—Kentucky	16
17—Connecticut	15
18—Georgia	15
19—Alabama	14
20—Wyoming	13
21—Dist. of Col.	12
22—Louisiana	12
23—New York	12
24—Ohio	12
25—Vermont	12
26—Indiana	11
27—South Dakota	11
28—New Mexico	10
29—Iowa	8
30—Texas	8
31—California	7
32—Mississippi	7
33—Florida	6
34—New Jersey	6
35—Michigan	5
36—Nebraska	5
37—North Dakota	5
38—Virginia	5
39—Washington	4
40—South Carolina	3
41—Maryland	2
42—North Carolina	2
43—Delaware	1
44—Utah	1
45—West Virginia	1
46—Oregon	1

National average ..... 14½

## THROUGH THE HAZE

*Of the Troubled Days That Now Beset Us  
A Wise Merchandiser Takes a Look Into*

# THE TRACTOR FUTURE

And While He's Dreaming He Slips Us the Very Pungent Thought That

**YOU CAN SELL TRACTORS THIS WINTER**

By Clyde Jennings

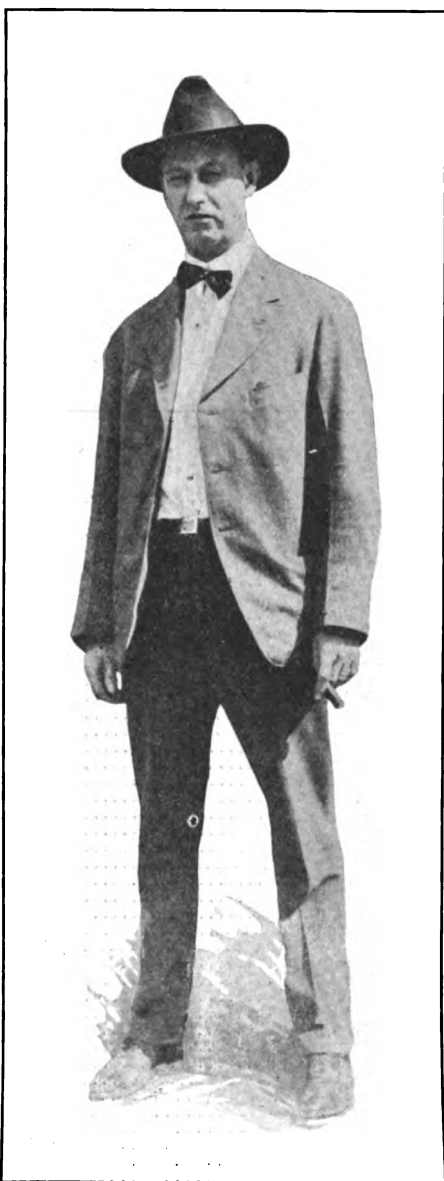
"THE months when the ground is frozen should be the real harvest time for the tractor dealer. I figure it this way," said W. S. Roberts, manager of the J. I. Case T. M. Co. branch in St. Louis. "In the season when the soil can be cultivated the farmer is busy, both in body and mind. He is working and thinking for his crops. His attention can be gained only at a sacrifice, and even then he is thinking of something else.

"In winter he is more or less at leisure. He is planning for next summer. A part of his object in visiting the town is to look things over in search of helpful things for the next season's work. This winter he is planning and scheming to overcome the shortage of labor. He is interested and his mind is open to suggestions. Plant the idea in his mind that the tractor will help him get through his next summer's work and he is immediately all attention.

"The best way to get his attention is to have on display a tractor. The automobile salesroom is ideal for this and the location should be at as prominent a place as possible. It should be convenient to the wagon yard, the garage, elevator or court house where the most farmers pass. It should be wide open and well lighted. It should have an air of welcome. The obvious invitation for the farmer to come in and look over the tractor should be there.

"Not only does this apply to the small town dealer, but to the city dealer who is located where any farm owner comes by.

"Let the farmer come in and look over the tractor. If two or three come in, so much the better. They will start a discussion somewhere along the line. The more they talk the more interested they will become. There should be a man handy to answer questions and to get the names of the visitors, but he should not be too forward in starting sales talk. Let the farmer plan and think it over. When he gives an oppor-



W. S. ROBERTS

*He is manager of the Case branch in St. Louis. He has sold both cars and tractors. He knows the strength and weakness of the motor car man as a tractor dealer*

tunity put home the strong points of your tractor, but don't knock the other tractor.

"In my opinion the months when the ground is frozen are the months to prepare for the sales and in many cases actually make them. But do not be in too big a hurry to sell in December."

It is obvious from the suggestions given by Roberts that he does not expect any motor car dealer who is planning to sell tractors to wait until spring to take his agency. *He expects him to get into the new business at once and to buy and put on display his stock in trade as early as possible.* He takes the very reasonable view that the man who goes into a business without investing anything is not going to make a success of it. He knows that a successful business cannot be built up from a catalog.

"I was much impressed by a display in Indianapolis that I saw a few weeks ago," continued Roberts. "A tractor dealer there had leased a 30-ft. vacant city lot and each morning he rolled onto this lot a tractor and hitched to it the proper plows and harrow, and he had nearby some other implements. It looked very workmanlike and was absolutely in the open, where anybody was welcome to walk in and look it over.

"There always were persons there looking over the tractor and talking about it. A suitable attendant was there to take part in these discussions and to set right any person who might draw a mistaken conclusion. This man was not the salesman. He probably could have been pushed into selling a tractor, but he would prefer the purchase to be made elsewhere so as not to disturb the interested audience.

"That is my idea of an excellent tractor display. Of course, in winter it cannot be duplicated out-of-doors, but it can almost be duplicated indoors. Make the conditions such that any man will feel welcome to enter and look the machine over. There should be nothing in the nature of the Don't-sit-in-this-car signs that often are seen in motor car salesrooms. I am talking of an exhibit that can be felt of, handled, where men can

## The Biggest Tractor DON'T

By W. S. Roberts

**F**ORGET all about speed. Speed has no place in the tractor business. Any practical farmer knows that  $2\frac{1}{4}$  miles is the proper speed for plowing. Faster than that does not do the work justice. Plows, harrows, drills and everything else that goes into farm work are based on the walking speed of a horse. Some day perhaps the implements will be speeded up, but not yet. The mold board of a plow is adjusted to this speed.

Forget the speed argument, and if the prospect suggests speed, tell him the cold facts against speed. The only place for speed is in road work, which is a minor item. Even then the gain is not worth the cost of wear and tear on road vehicles. The demonstrator who makes a point of speed in his trial is doing his tractor and the people watching an injustice. Every tractor owner learns sooner or later that speed is not desirable. A great gain is made in ultimate speed because of the steadiness of the tractor as compared with horses. The net result of this should be enough to convince any tractor buyer in the end.

sit in the driver's seat, move some of the levers, see the oil and stick his finger in it and all of the things that a farmer or tractor owner likes to do.

"Also the implements want to be exactly the kind that this tractor will use so as to implant into the inquiring mind the co-ordination of the unit. If you show a three-plow unit with a two-plow tractor, you have done yourself an irreparable injury. Also you are guilty of false pretense on some prospective customer. Start right and stay right in all details."

Roberts is one of those who believe that many motor car dealers are going to make good on tractors. Also he believes that they have several years ahead of them when tractors will lead motor cars in sales. This appears to him to be a reasonable proposition because he thinks that labor will be scarce for a long time after the war and that utility restrictions will be so heavy on steel that the manufacture of motor cars will be less than the demand for a long period. Such motor cars as come through in this period will sell themselves and the energy of the selling plant can be turned to tractors.

"Late this summer," he said, "I closed

a contract with a large motor car dealer in Illinois who had three salesrooms and service stations. When the radical action was taken toward cutting down the motor car production this man suspended his motor car selling department and took his available selling force to tractors.

"His service stations will, of course, be continued to care for the motor cars he has in use. It appeared to me that this man was going into the tractor business with a tremendous overhead, but he had to carry this anyway and the tractors certainly will help.

"We estimated the probable needs of the territory he covered and put his order at this number of tractors to give him a definite target. He is succeeding in placing tractors. His orders for immediate delivery have been larger than expected.

"The secret is that he discarded the motor car idea entirely and began at once to educate his force in the new selling idea. The proposition was put squarely to the sales force. It was learn the tractor selling idea or get out. There was no opportunity to hang onto the motor car and be a slacker on the tractors. There was no motor car job left there for a member of the selling staff. The conversion was actual and complete.

"He probably will sell some motor cars if the factory can ship him some, which

he doubts. But these cars will sell themselves. He has hundreds of the two lines he sold in use, and if he can get a new car he merely calls up some of the urgent prospects on the waiting list and says: 'I have just heard that I can get a — touring car. It will cost, set down here, \$1111. Do you want it? You will have to take it without demonstration on the factory guarantee.'

"If this prospect is ready, all right. If none of his prospects wants the car, he will let it go to some dealer who is trying to sell, while he forges ahead on the new and big plan of selling merchandise that he can get in sufficient quantity to make selling worth while."

The service question is a very simple one to the man who will sell his tractors properly, according to Roberts. He figures it this way:

"Most service is demanded because the buyer does not know the machine. Service must be cared for before the machine is turned over to the man who will use it. Drill him carefully. Show him in the field how to work it. Get it well into his head that the carbureter, ignition and some other parts will not stand open storage, wetting, etc. They must be kept clean and dry. A man well sold is one who will demand a minimum of service.

"Send tractor owners and prospects to  
(Continued on page 38)

## He Wrote a Song—And Sold It



Seneca G. Lewis, general manager of the Pennsylvania Rubber Co., wrote a song called "Georgia Land." We never knew that a rubber man could write songs—but he did. And then he had it displayed in the company's branch windows and sold, over the rubber counter at 15 cents each. Several hundred dollars were netted for the soldiers' smoke fund. This picture shows how the company's Washington, D. C., branch put on a display. Moral—If business gets dull write a song and sell it in your display window. Or, better still, write a poem and let Motor World print it

## *Building Up*

# A Combination Truck and Trailer Business

*Hints to Dealers May Be Drawn from the Success of a Philadelphia Concern Engaged in Hauling and Transporting Material*

*This Concern Rents Out and 'Boards' Trailers, Keeps a Large Garage and Has Its Original Shop System of Records and Repairs*

**H**ERE are a few "stunts done by truck-and-trailer plan in Philadelphia and vicinity: Moving a three-room bungalow with the family all in it 6 miles across the city of Philadelphia.

Taking a well-drilling machine, weighing approximately 11 tons, 45 miles from Swedesboro to Wrightstown.

Delivering 30 tons of structural steel in one trip, with three 5-ton trucks and three trailers, from Philadelphia to Washington, beating out an embargo.

Taking 10 tons of concrete steel in 60-ft. lengths with one truck and two trailers over a distance of 20 miles partly congested traffic.

*By K. H. Lansing*

**D**O motor truck fleet owners and garagemen fully realize the possibilities for profit in both the renting-out and 'boarding' of trailers?"

That question recently was asked in the writer's hearing by a member of the Motor Truck Owners' Association of Philadelphia, a comparatively new organization, composed of both fleet and individual truck operators.

### They All Want Them

"The demand for trailers, especially of 4 tons' capacity or thereabouts, suitable for long hauls, is greatly increasing," said the propounder of the question. "The fleet owner has begun to realize that trailers are very easy to handle, much easier, in fact, than trucks of similar carrying capacity.

"They can be turned in a much smaller radius; their operating cost is low as compared with that of trucks; there is little to get 'out of kilter,' and the truck owner can double his load without having to pay extra labor.

"For about \$2 a day additional, to cover trailer operating expense, a truck with a trailer attached can carry double the truck's load, and even under certain circumstances make an increase of 80 per cent in the profit. Take a truck earning alone \$24 a day. Say it costs \$14 a day to operate, or a profit of \$10. By linking up a trailer for \$2 a day more, the profit would be \$18 instead of \$10.

"So much for the desirability of having trailers. Let us now see how the fleet

owner who has his own garage can make something out of such of his trailers as are not in use.

"In times like the present and in a town like Philadelphia which is in a shipyard district, there are always jobs for trailers. The small fleet owner or individual truck owner who is called on to move a large quantity of material quickly would be mighty glad to know where he could rent trailers for that particular job.

"The large fleet owner who has trailers not in use should advertise and make a business of renting them, by the day or month, if he is sure they will not be needed suddenly and he has enough contracts ahead to keep him busy without using all of them. Idle trailers don't, of course, cost as much as idle motor trucks, but it pays to keep them moving.

"So rent 'em out.

"It's easy to dope out the operating costs and what you will clear on them for your charge per day or month. Be sure to have an agreement whereby any abuse or breakage must be paid for by the lessee.

"As for taking in trailers as 'boarders.' There is profit here, too. You can store more trailers in a given space than you can motor trucks. You charge for live and dead storage on motor trucks, let us say. Well, the wheel base of a trailer is less than that of a motor truck, the trailer being ordinarily only as long as the actual loading space of the truck.

"As wheelbase is the basis of the charge, and as you can store more trailers in your garage than you can motor trucks, there's money in it if you can get enough trailers as 'boarders.'

"I can place three trailers now where I put only two motor trucks. The logical man who would need to store trailers is the big contractor who has found it necessary to add to his equipment without having had time to house it. There are many such.

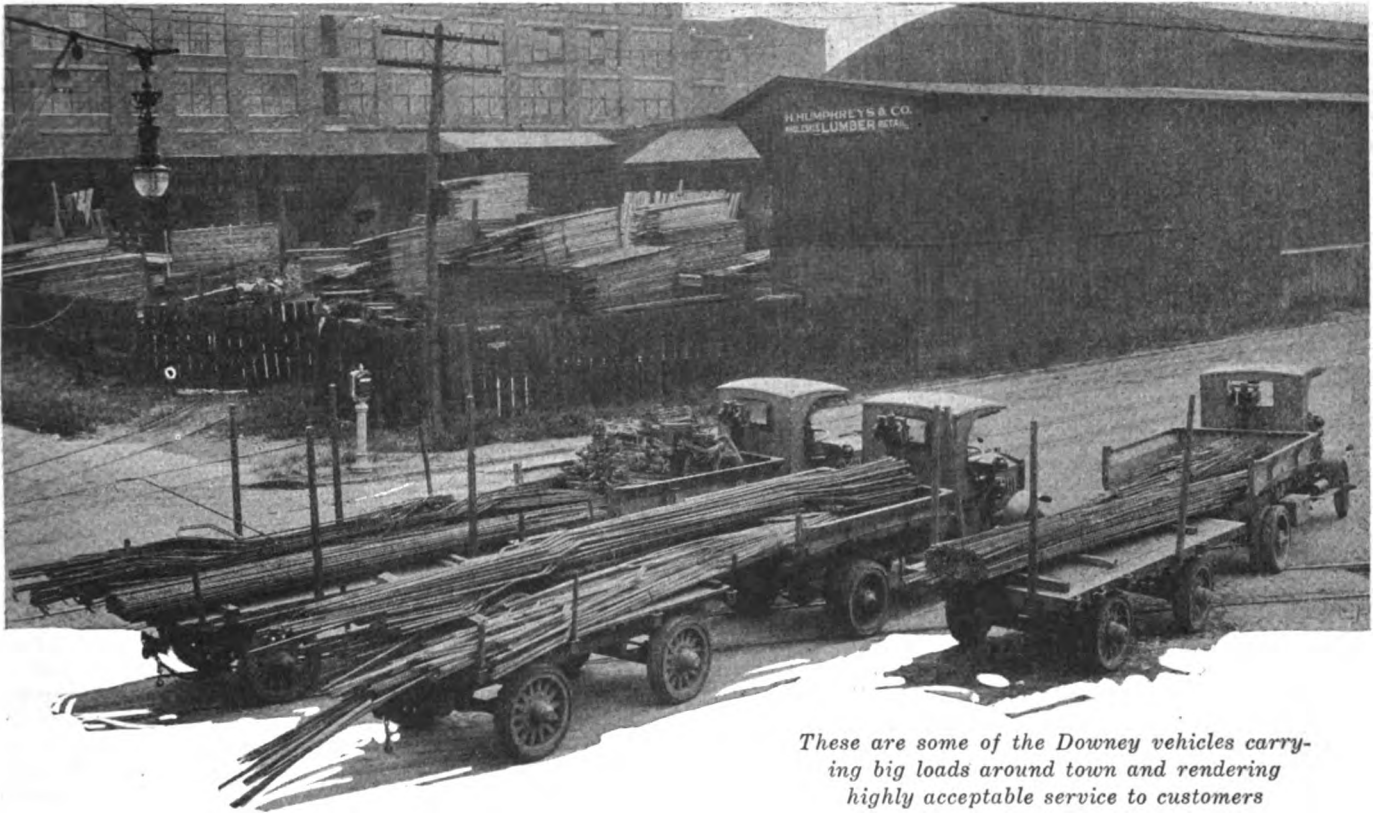
"And don't forget there is no risk on storing trailers.

"Trailers don't wear out easily," continued the speaker, "and in my experience here as a fleet owner I have known but a single instance of a second-hand trailer being on the market, and that, after 2 years' use, was sold for only \$5 less than it brought when new. The trailer had been originally purchased for \$1,395 f.o.b. factory, or \$1,480 Philadelphia.

### Few "Second Hands"

"The reason that it was sold after 2 years was because the paper mill man at Manayunk who purchased it was selling his mill and concentrating his business in his box factory at Chester, Pa. A large milk concern in Philadelphia was glad to get it for \$1,390. A 'gyp' would starve to death if he waited for second-hand trailers to appear on the market here, for they are used as long as they hold together."

Armed with this data, some of which was approved and some doubted as en-



*These are some of the Downey vehicles carrying big loads around town and rendering highly acceptable service to customers*

tirely practical by various fleet and garage operators, a call was made at the office of the Downey Contracting Co. in the Pennsylvania Building, Philadelphia, which was reported to be doing a lively business in contract hauling and transportation of materials, as well as renting its trailers when not in use.

While the Downey Contracting Co. derives a good profit per outfit from renting motor trucks and trailers, thus far such rentals are ordinarily made but two or three days a week. But the possibilities for the growth and development of renting and storing trailers as "boarders" were admitted. The Downey com-

pany both rents its machines out and "boards" those of other concerns.

While it conducts a garage, the Downey company's garage and repairshop are in the main devoted to its own business. If some "boarders" are accommodated, it does not mean that the garage is a public one.

The Downey company has a permanent fleet of 50 motor trucks which it owns. It has a working agreement with a number of other concerns in the same line, whereby when one of these companies is short it can rent trucks from the others. This interchange idea works out so well that sometimes the Downey company has

as many as 40 motor trucks from outside working on jobs, in addition to its own fleet.

The Downey fleet consists of Rikers with a 4-ton rating and Pierce-Arrows of 5 tons' capacity.

At present four Troy trailers and a pair of wheels or pole-trailer for carrying long materials such as poles and steel bars are used as auxiliaries to the motor trucks, although this equipment probably will be increased considerably.

Where these trailers are rented out, an extra man can, if desired, be included in the outfit.

The usual tariff is \$35 a day for a

## You Must Show the Prospect What Trailers Mean to Him

*Operating costs, comparing those of the truck with the trailer, are thus given by a trailer concern for comparison, a medium size, 3 tons, being given in each instance:*

TRUCK		TRAILER	
	Per Day		Per Day
First cost, \$3,500. Life, 5 years, working 300 days per year, or 1500 days .....	\$2.33	First cost of trailer with solid rubber tires, \$1,180. Life, 5 years, working 300 days a year, 1500 days.....	\$0.786
Gasoline—9 gal. per day, at 25c.....	2.25	Tire cost, based on manufacturers' price to consumer, 4-in. pressed-on tires, \$133.40. Assuming trailer will run 50 miles per day and figuring on basis of 7000-mile guarantee, 0.019 a mile, or for 50 miles.....	0.95
Oil—1 qt., at 65c. per gal.....	.163	Repairs, at \$35 per year.....	.116
Tire cost, based on manufacturers' prices to consumer, pressed-on tires, 5 in. front and 5 in. dual rear, \$263.06. Assuming truck will run 50 miles a day and figuring on basis of 7000-mile guarantee, this gives .037 a mile, or for 50 miles .....	1.35	Insurance, fire, at \$1.50 per \$100 on value of \$1,180 per year \$17.70 .....	.052
Repairs at \$300 per year.....	1.00	Insurance, liability and property damage. Trailer rate is about 25 per cent of truck rate. Therefore, rate for a year would be \$25, or.....	.083
Driver's salary .....	3.25	Grease at \$1 per year.....	.003
Insurance, fire, at \$1.50 per \$100 on value of \$3,500, per year \$52.50 .....	.175	Interest on investment, at 6 per cent per year, \$1,180, per year \$70.80 .....	.236
Insurance, liability and property damage. This runs from \$50 to \$126 a year for limit of \$5,000 liability and \$1,000 property damage. Figuring on basis of \$94 a year.....	.314	License fee estimated at \$5 per year, though in some places not required .....	.016
Hard grease—cups and wheels at \$5 per year.....	.016	Increase of gasoline consumption and tire wear on truck, estimated at 10 per cent.....	.41
Interest on investment at 6 per cent.....	.70		
License fee, \$5 per year.....	.016		
Total operating expense of truck.....	\$13.064	Total operating expense of trailer.....	\$2.659





*Reilly Applies*

## THE SELECTIVE DRAFT

## TO HIS PROSPECT LIST

*He Separates the Fit from the Unfit and Starts a Real Aggregation*

By Ray W. Sherman

"MR. REILLY," inquired Nellie, chief engineer in the business office of C. J. Reilly, Inc., "what about these prospect lists?" And she laid before the boss a tabulation which showed many, many names in the sales file.

"Why? What do you mean?"

"Well, we have been mailing things regularly to this list," Nellie explained. "There are names that have been on here for months. The salesmen don't mark them off. They want them left on. And postage is high, paper is getting higher and it is boosting expenses considerably."

"What should we do?" asked Reilly, which was his favorite habit of sparring for time while he got his bearings.

"Can't we cut the list down?" she suggested.

"Maybe—how much do you think we can cut it?"

"I don't know—but I'll bet there are on that list names of people in Callawassa who never will buy a car in a million years, and I'll bet there are people who are in the market for cars who aren't on the list."

**Must Keep at Them**

"That's probably true," Reilly agreed. "It's true of every list. There simply has to be a certain amount of waste. If we KNEW who would buy cars it would cut our selling expenses considerably. We always have to take a chance on some names and keep at them in the hope we can make prospects out of them. Some of them are only prospective prospects when we put them on."

"I know all that," Nellie contended, "but I'll bet there are names here about which some of the salesmen know almost nothing, so far as changes have come about since the war began."

"Well, let's see," suggested Reilly, and just then, to his own personal misfortune, young Roper walked into the office. Fate always seemed to have it in for Roper.

"Roper," said Reilly, "give a look."

Roper walked over and "gave a look."

"We've been talking about the prospect lists," Reilly explained, taking from Roper's desk that young man's card file. "We have been wondering whether we aren't carrying a few more than is necessary, considering the high cost of paper and postage."

"Of course," Reilly continued, "we can't cut down our activity too much or we'll lose our grip on our trade, but maybe we can drop part of these lists for a while without hurting ourselves any. Now—" and here Reilly picked from Roper's list the first card. "Here's Benjamin J. Burner, seventy-seven Lilac avenue, hardware man, interested in touring model, has a five-passenger Colt that he wants to trade. How about him?"

"That's correct," declared Roper, who could also read the card over Reilly's shoulder and therefore knew the card said what the boss read.

**Up-to-Date Information**

"I know it's correct according to the card," Reilly smiled, "but are we absolutely sure the information is up-to-date? Have we made sure conditions haven't so altered in Burner's case that he won't be in the market for a car until after the war?"

"Well—"

"I see by this that you are still calling on him," Reilly continued. "He was on the verge of buying, according to this card, about the time the war started on this side of the ocean, and since then you have made several unsuccessful calls and your latest report is that he wants to wait a while."

"Now—have you seen his old Colt car and do you know what condition it's in?"

"No, not lately."

"Has any of his family gone to war?"

"I don't know."

"Is his wife head over heels in war work—or not?"

"I don't know, you see—"

"How is his business? How is the hardware business generally?"

"I don't know, but—"

**Make Sure of Prospect**

"In other words, we aren't certain at all as to how good a prospect he is, and still we're mailing letters and literature to him. Am I right?"

"I'm afraid so," admitted Roper, who knew he was cornered and might as well have the admitting over early and get down to what came later.

"If the hardware business is off, he probably won't buy a car. If he has a boy in the army he probably feels he

ought not to buy a car while the war is on. If his wife is all wound up in war work she probably feels the same way. If the old car is in good condition they may need some overhauling but not a new car. Burner may be a prospect for overhaul work and not for a new car."

Reilly laid the card aside and picked out the next one.

"Here's Tobias Tankman—he's no prospect. His boy was one of the first over the top at Chateau-Thierry and he's carried as missing on the casualty lists. Tankman won't buy anything for months. And here's Robert Jedd, a machinist at the furniture factory. The factory has nearly shut down inside the last thirty days. Is Jedd still on a good job, or not?"

"I don't know," said Roper.

**Apply the Selective Draft**

"I wouldn't wonder but that there's something in your suggestion, Nellie," declared Reilly. "I guess we'd better apply the selective draft to these lists and really learn something about them. As a starter we'll go through them thoroughly and get some real information about the names. Each salesman will have to comb his own list. As it stands now I'm ready to chuck the whole mess in the ash can unless a salesman can show me some reason why the name should stay on the list. This is going to be a very select army when we get through with it and no name will be left on the muster roll unless it can pass a very severe sales examination. This is a year when the question is 'Why keep him on?' instead of 'Why not keep him on?' as it used to be."

"Possibly some of the prospects who own cars now may be very profitably listed as overhaul prospects. Possibly some of them may want to sell their cars. They may be listable for various purposes, but let's find out something about ALL of them and make these lists mean something. Until then, Nellie, lay off this circularizing and let's not spend any more money unless we know what we're spending it for."

Whereupon Roper began sorting out a handful of cards from the Ninth ward as a beginning in his quest about what he was doing.

# Winter Business

**You  
Must  
Fight  
Over Here  
and  
Over There**

## Keep the Roads Open This Winter

*Help the Country and Boost Your Own Winter Business*

**T**HE dealers, garagemen and all the rest of the trade should see that the highways are kept open this winter. Last winter the roads in some sections were kept plowed, and traffic ran all winter. In other sections, a good example of which is New York State, the roads were not kept cleaned, and some of the Government truck trains had great difficulty getting to the seacoast. If this road cleaning idea is pushed hard during the war—which is a fine time to get consideration for new ideas—it may be possible to have it continued after the war and retained as a commercial benefit.

The benefit from keeping the roads open in winter are two-fold. The dealers are benefited and the country is benefited.

Benefits to the dealers:

1. Keeps trucks and cars running and shows the commercial possibility of the car and truck. A vehicle that must be laid up all winter is not the best of investments in the minds of some prospects. But if means can be developed for keeping motor vehicles going all winter a big handicap is removed.

2. Service work is increased. The more cars and trucks that are kept in service the more service work there is for the dealer.

3. Truck sales will be increased in the winter because prospects will see that the truck can be used immediately after it is delivered.

4. Car sales, both new and used, will be kept up during the winter, and especially the sale of used cars for strictly utilitarian purposes.

5. The Rural Motor Express idea can be sold prospective operators if they can be shown that the roads are to be kept open.

Benefits to the country:

1. The public, which pays for highways, will get a greater use from them.

2. The railroads will be relieved of

short-haul work the same as they are during the warm months, and this relief will be an even greater assistance to the railroads during the winter, for that is when the railways have enormous difficulties.

3. This addition to transportation facilities helps the war. It permits more goods to be moved. It permits trucks and cars to be driven from the factories to shipping points and permits the carrying of materials.

**Suggestions as to How to Do It**

1. The best way to have this work handled is through a State appropriation. If there is no movement toward this, the

dealers may be able to institute a civic organization of some kind to seek the appropriation. Or the dealers may organize an "open roads" campaign and push the appropriation.

2. If the State won't act, see if the county can't be persuaded to make an appropriation for this work and keep the main roads cleared at least within the county.

3. If possible, get the full cost of this work. If not possible, get what you can and do what you can to help out.

4. If necessary, do some free work. Organize the trade as a road clearing bureau and systematize the work. From each dealer secure certain men for certain jobs, subject to call when needed, with one or more men in charge of the work.

5. Get snow plows. Perhaps the county or some farm organization can be induced to pay for these.

6. Train men in snow work. Learn the best ways of doing the work in the shortest time.

## Here Are Four Ideas

### One for Farm Light

*First, learn if your prospect can afford to buy a plant. If he hasn't any money or prospects, you're wasting time.—Fred. L. Tubbs, vice-president, Alamo Farm Light Co., Omaha.*

### One for Hiring Farm Light Salesmen

*We hire our salesmen on straight salary and don't give them any commissions to tempt them to sell a plant just to get the money. We insist on satisfying the customer.—Fairbanks, Morse & Co., Denver branch.*

### One for the Accessory Man

*One of the Kansas City garagemen who has eliminated most free service, charges a minimum of \$1 for delivery of an accessory, \$2 for two miles, and so on up—and charges extra for mounting tires so delivered.*

### And One That Saves Money

*The electric Vehicle Garage, Denver, utilizes backs of circular letters, duplicate invoices, etc., for scratch paper.*

# Well—What Do YOU Think About It?

## What Are YOU Going to Do This Winter?

NOTE TO THE EDITOR—Doubtless most motor car dealers are progressive, alert; doubtless many are secretive about their own business plans and won't tell an outsider what they are going to do. Some people who, like myself, have asked dealers what they are going to do when cars run short have a notion that a few dealers are neither progressive nor secretive—they're just dilatory. I want to get the following stuff off my chest. If you print it, maybe some salesmen who have likewise suffered may be likewise relieved. So here goes:

### And Here It Is

I KNOW a man who has been very successful in the life insurance business. He knows just one kind of policy—and has sold only this one kind. Other life insurance men may talk to prospects about endowment and participation, disability clauses, and so forth; which are all Greek to him.

This fellow would be in a h— of a fix if war conditions should force his company to suspend issuance of that policy. He would probably quit the life insurance business. He can't conceive of himself selling any sort of insurance protection *except that one kind of policy.*

And that's just about the fix some motor car dealers seem to be in. It has never occurred to them that there is anything else they can sell, *except motor cars—and, worse than that, anything except one particular kind of motor car.*

*It has never entered their heads that there is anything else to sell—except motor cars.*

The thought has not bobbed up in their minds that they might have to earn their living doing something else than selling motor cars.

If they had lived a few thousand years ago they would not have learned that Noah was building an ark.

Consequently, they would have considered themselves justified in disregarding the vague and wild rumors of a possible flood.

Noah and his family would have been exasperated at such a man—but Noah would have been wrong. Such a man absolutely cannot get into his head the idea that a flood is possible—he just can't think of a flood.

If by chance such a man had been shanghaied, and kept on the ark, he wouldn't have been able to conceive of a world not covered with water.

Imagine such a man at the front, in the trenches. *He'd wake up to the truth that a fighter fights with what he can get hold of.*

"Funny about some motor car dealers." A truck salesman spoke.

"They really have not made any plans to keep in business when the passenger car supply is exhausted.

"Met one Saturday. No more cars after Jan. 1. Has three new cars—four or five used cars—on hand.

"What are you going to do after Jan. 1?" I asked him.

"Durned if I know," he said. "My repair business won't hardly keep me."

"Great Gobs," I said. "Stone wall right in front of you and you aren't even looking for a ladder?"

"Oh, I'm looking around"—and he did look around, albeit rather vacantly, not seeing anything.

"But," I continued, "haven't you got a lease here—a merchandising plant—all necessary to do business except something to sell?"

"Oh! I own the place!"

"That settled it! He didn't have to worry about the rent!"

"I could close up shop, you see," he went on, "and not lose anything—maybe get a job—I hear there's good money, three or four hundred dollars a month maybe, in some of these war jobs."

The salesman looked worried. He was worried. He was a patriot.

"Whatrya goin' to do with a gink like that? Wishing he was a labor profiteer. Rather stick the Government for easy money than keep and build a legitimate, productive business of his own."

"Did you get him to stock trucks?"

"The salesman came out of his reverie.

"Oh, yes," and he brightened. "Say, that gave me the chance I'd long wanted to open up and tell a lot of things I had been accumulating for want of a fit subject to tell them to. I talked about duty to customers, to public; about his duty to his community and family, and himself. Win the war—you know—each fellow doing the thing he can do best—we in the automotive industry have to keep the wheels going.

"When the boys come back, are you going to tell them you laid down—and took a labor profiteering job? And then I talked trucks. Got real interested myself, in listening to how important trucks are at home during the war. Finally got him to the point where he agreed to buy two trucks for his sales floor.

"But he won't really get the fever to sell them or think about tractors or service, profits or anything else until he comes down some morning and finds all his passenger cars gone."

[Anybody else got anything to say on this subject?—EDITOR.]

## WHY?

[Reprinted from The Leader, of the N.A.A.A.J.]

O, why should the business of winter be dull?

There's a question for dealers and jobbers to mull.

Through the hot months of summer the orders come fine, But when it gets cooler they hit the decline.

O, why should the business of winter be punk?

There's a reason, of course, but it's mostly all bunk.

If the folks would get busy in store and garage

The reason would fade like the merest mirage.

O, why should the business of winter be dead?

When it should be alive and quite healthy instead?

Does the motorist quit when the weather gets cool

And go back to the horse, or recalcitrant mule?

O, why should the business of winter run down?

With the roads getting better in country and town.

With a million more motorists now than there were,

With the needs of repairs that are bound to occur.

O, why should the business of winter be bad,

And why should the jobber and dealer be sad?

Well, it's largely because they expect it to be,

And it meets expectations right down to a T.

O, why should the business of winter be slow?

Well, to tell the truth, I'll be damned if I know.

But I'll give you my word, if we all boost together,

Good business will not hang on season or weather.

## Do This

Look around your territory and see how many cars will need a coat of paint by spring. Tell the owners they'll like new cars then but can't get them.

The solution is to let you make 'em shine and get 'em ship-shape while the cold weather lessens driving possibilities.

Make your service pay.

# *You Must First Be "Alive" If You Would* **Be a Live Farm Light Dealer**

**Just Because You Are a Motor Car Dealer the Farm Light Business Is Not Going to Be Thrown Into Your Lap—**

***But—If You Are at All Alive the Farm Light Manufacturer Will Gladly Give You the Preference***

***AND—IT'S A BIG OPPORTUNITY FOR YOU***

**S**INCE the advent of the automotive idea it has been a pretty well recognized fact in industrial circles that the motor car dealer should handle other things than motor cars. For two reasons:

1. *He needs more than one leg under his business.*

2. *The other automotive lines need the merchandising system of which the motor car dealer is a part.*

Wherefore, some dealers have imagined that simply because they are motor car dealers the makers of automotive apparatus are going to beg them to take their wares and that a prosperous automotive business is going to be thrust upon them.

*Nothing is farther from the truth.*

No wise manufacturer of anything is going to give the distribution of his goods to any dealer unless that dealer is fitted to handle them like a business man. Of course, there have been dealers who got agencies for cars and trucks and merchandised them in an inefficient way, but that was because there was no other outlet for the manufacturer. He had to take what he found—more or less.

But sometimes he didn't have to take what he found. Sometimes he flatly refused to take what he found.

**The farm light maker needs the live automotive dealer and the live automotive dealer has a big opportunity in farm light.**

In some towns the road men of factories found that the existing dealers were disreputable representatives of any factory. The places were dirty, the toilet facilities disgraceful, the methods haphazard—when there were any—and everything generally undesirable.

**"We see every reason why the automobile dealer should take up the sale of farm lighting plants—"**

In those cases factories have been known to interest live men and to create dealers who measured up to factory standards. And the factories were accused of running in opposition to the dealers, whereas the opposition was the best thing that could happen to the dealers if they were only live enough to see a benefit when it came to them.

Of course, some factories have not been exactly fair in all cases, but they have been entirely right on many occasions when dealers declared them to be wrong.

And in the entry of the farm light plant as an automotive product the makers of these systems recognize the automotive merchandising chain as a fine medium for getting these plants into the hands of the public, but it does not necessarily follow that the agency for a plant will be given to a dealer simply because he has sold motor cars. What the factories want is LIVE dealers, and the dealer who wants to go into these lines should get himself into the live class, for two reasons:

1—*So he can get the agency.*

2—*So he can make some money out of it after he gets it.*

For a dead dealer is a liability to any trade. He is better out of it.

Some of the best makers and distributors of farm light systems have gone on

record along these lines, and if the automotive—or would-be automotive—dealer chances to complain that the maker of farm light, trucks, tractors or anything else is placing his wares in wrong hands the dealer should carefully scan himself and this "other dealer" and see whether the agency hasn't been placed on a basis of "liveness."

The Scheffer & Rossum Co. distributes a lot of things out of St. Paul, and among them the Lalley Light. C. L. Gaven, sales manager of the company, sums it up well when he says: "We have not offered the Lalley Light to all dealers because while a good automobile man will make a good Lalley dealer, a poor automobile man will make a poor farm light dealer." And there you are.

But this company also recognizes farm light as a big opportunity for the automotive dealer. "Farm lighting business," says Gaven, "as we see it to-day is the best possible opportunity for the live automobile dealer. It will not fall easily and requires lots of hard work, but after being built up in the right way it will assure the dealer a handsome profit for a number of years to come.

"It may be at first that his sales will not come very fast, but the idea is simply to get the best man interested in various groups or communities. We have in mind one of our dealers who ran along for quite a while without making any sales. He finally landed the leading farmer in a certain Bohemian settlement. To date he has sold five others in this same group and tells us he will sell all the rest of them." All of which only bears out the assertion that the live dealer can make money at it.

So far as an evidence of liveness is concerned, the viewpoint of the dealer is to a large extent an indication. Motor car dealers who sit back serenely and be-

**"—and there is certainly nothing in the way of his making a big success of it."**



lieve they will survive the war and live happily ever after may and may not cash in on their one-legged idea. The live dealer is at least investigating. Many of them have taken farm light agencies.

**THE BEST KNOWN AUTOMOBILE DEALER IN THE UNITED STATES IS ENGAGED IN SELLING FARM LIGHT.**

There are dealers who "can't see farm light." Many of them have excellent reasons for not taking it, while others are passing up the opportunity of a life time. "The resistance we meet," states Gaven, "in going after automobile dealers is caused principally by the fact that they have made some money out of their automobile business and hesitate to change, although they are now beginning to realize that they will get no more cars until after the war.

"Furthermore, because of the fact that a farm lighting plant does not move on four wheels *they are a little slow to perceive the enormous field open in this direction.* It is not at all surprising to us to meet this resistance and we feel it will be simply a matter of educating automobile dealers in the same manner they were first educated to take on the automobile."

"We are placing our lighting system through some automobile dealers, but not altogether," states F. F. Gallagher of the Black Swan Co., Waseca, Minn. "We have some very good dealers who are in the electrical business, hardware business and implement business in the various towns. Our experience has taught us that it *pays to get a good live dealer and that this live dealer is not necessarily in one particular line of business, hence the varying business of our dealers.*"

This farm light maker also sees from his vantage point the manner in which some dealers grasp the opportunity while others let it slide by. "I consider the lighting system an opportunity for automobile dealers," says Gallagher, "as it is a coming thing and will be as generally used, I believe, as the automobile. Some of the automobile dealers realize this fact and are very enthusiastic, while others are apathetic and will probably wait until their competitors have proven beyond a doubt that it is a *paying proposition to get into.*"

One of the reasons dealers may be apathetic is that they have had more or less easy sailing during the heyday of the motor car business. The demand has been greater than the supply, which has required some dealers only to sit on a chair and take the profits that the buyers have handed them. This has made the dealer "lazy," according to J. V. Hardy, who operates the Hardy-Lalley Light Co. in Dallas, Tex.

"All automobile dealers as a class in this territory," he indicts, "have had *easy sailing for the past three or four years and have lost their progressive pep*, so much so that it is necessary for us to create demand before we make profitable deals.

"We find that the direct purchaser is farther advanced than is the dealer and that it is *the dealer who is yet really asleep at the switch and not awake to his*

*golden opportunities.* At this time it is our candid prediction that there will be more farm light plants sold in the next ten years than there have been automobiles sold previous to the past three years."

And the Woodward Carriage Co., San Antonio, Tex., says that farm light is an opportunity for the automobile dealer *"depending on his ability."*

In other words, a live automobile dealer can make money out of farm light and a dead one can't. So far as that goes he can't make money out of anything—and never has.

**"—a good automobile man will make a poor farm light dealer."**

The farm light men want distribution. Their business is in the process of expansion. **SOMEBODY IS GOING TO SELL FARM LIGHT AND MAKE A LOT OF MONEY OUT OF IT.** It does not depend on the automobile dealer. If he doesn't get into the business some one else will, for **FARM LIGHT IS GOING TO BE SOLD IN ENORMOUS QUANTITIES.**

Five or ten years from now a lot of dealers are going to kick themselves most heartily when they see the profits that their competitors—in and out of the automobile line—are making from farm light, and all that the didn't-get-in-dealers will have to console themselves with will be the memory of the wonderful "judgment" they exercised in 1918 and 1919.

The farm light people are sold on the need of the automobile man as a farm light dealer. "The automobile man," says Swift Miller, of the Mayhew Co., Milwaukee, "has the advantage over the electrical dealer, or contractor, in that he has an automobile at his disposal and can easily keep in touch with his country customers.

"He is also accustomed to putting a reasonable amount of sales effort on each prospect and is as a rule a good salesman. One of the most important things in his favor, however, is the fact that he has already developed a wide acquaintance among exactly the class of people who are logical prospects for farm lighting plants, and *in many cases he will be able to sell plants to the same people who have already purchased automobiles from him.*

"We are pleased to go on record as being firmly convinced not only that automobile dealers will find this a very profitable line to handle but that they are in a particularly advantageous position to make a success of this business.

"It is recognized among lighting plant manufacturers not only that the automobile has been a great factor in preparing the market for the modern farm lighting plant but that the experience of the automobile dealer and repairman has made him better qualified to sell lighting plants

*successfully than either the implement dealer or the electrical contractor.*

"In the first place a modern farm lighting plant is essentially the same in all its details as the lighting equipment of an automobile. The automobile man has had experience in the care of storage batteries, is familiar with the operation of the automatic cut-out and knows the function of the various elements in the system, so that, as regards the technical end of the proposition, it is old to him.

"We see every reason why the automobile dealer should take up the sale of farm lighting plants, and there is certainly nothing in the way of his making a big success of it."

With Miller's statement the other farm light men are agreed. The automobile man has by his previous training in mechanics and selling fitted himself for adding this product to his line at small expense and with the possibility of a big profit—now and after the war.

But, like all other manufacturers, the farm light people are looking for "live" dealers. They are beginning to expand their business. They are, to a certain extent, making a new start—and they don't care to start wrong. They don't want to make connections with dealers who will have to be changed later on because they can't make good. The makers want to secure permanent connections that will assure profits to both makers and dealers over a long period of years without the jars and readjustments necessary when a dealer doesn't make good.

This means that the dealers who get the farm light business are going to be the live ones. And if that procedure is followed there will be a lot of money made by both makers and dealers.

One word more might be added. It covers the whole of our and all other industries. It is this: There is going to be a weeding out of inefficient dealers in all fields after the war. The process is now beginning. Some have gone already. The march of progress is rapid to-day and every dealer should try to keep up.

And—the *farm light maker needs the live automotive dealer, and the live automotive dealer has a BIG OPPORTUNITY IN FARM LIGHT.*

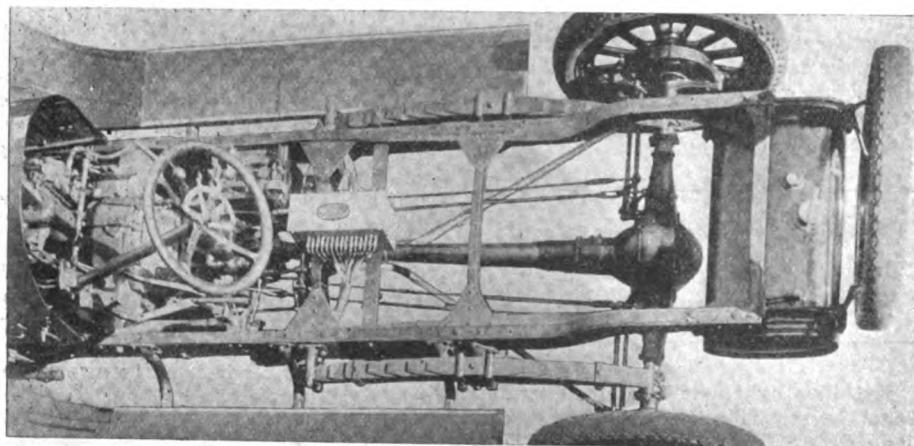
**International Harvester Suit Dismissed**

WASHINGTON, Oct. 23—The anti-trust suit brought against the International Harvester Co. has been dismissed. This is in accordance with arrangements made for the dissolution of the company approved by the Department of Justice.

**Wichita Motor Adds Tractor**

WICHITA FALLS, TEX., Oct. 23—The Wichita Falls Motor Co., which for some time has produced motor trucks, is entering the field with a farm tractor. It is a four wheel machine with a four cylinder, vertical 4 x 6 valve-in-head engine with magneto ignition. It has two speeds forward and one reverse, with drive through gears to the rear wheels and all driving mechanism operating in an oil bath. The weight is 4500 lb. and the drawbar pull 3000 lb. It will sell for \$2,000.

# Single-Feed System Lubricates Chassis from Driver's Seat

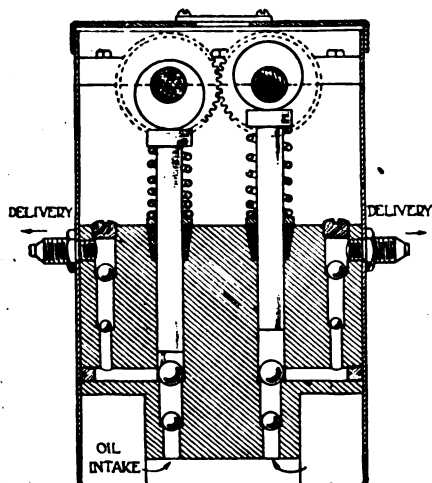


*Chassis fitted with Semco-Skelly lubricator under the front seat*

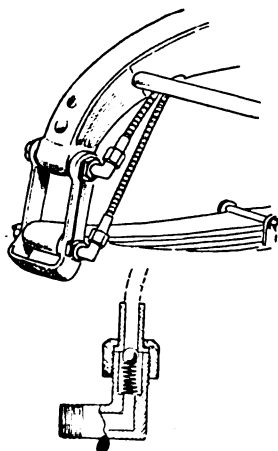
**T**HERE has been a noticeable tendency toward the use of oil for the lubrication of car and truck chassis during the past 2 years. Now comes a centralized system of lubrication, the Semco-Skelly, in which a reservoir furnished with a number of tubes feeds oil under pressure simultaneously to all the points on the chassis requiring lubrication, by a few movements of a small lever situated at the driver's seat. Manufacture is now in progress on this new lubricating system by the Smith & Egge Mfg. Co., Bridgeport, Conn. It consists of a sheet steel reservoir inside of which is placed a multiple pump with a separate plunger for each of the tubes. As shown in one of the illustrations, the plungers are arranged in parallel sets of fifteen, with a cam above each set of plungers. These cams give  $\frac{3}{8}$  in. throw and are geared together, 180 deg. apart, at the end. An extension of one of the shafts is fitted with a ratchet handle which pro-

jects through the front of the seat. The overall dimensions of the reservoir are 12 in. by 4 in. by 7 in. high.

As shown in the sectional drawing herewith, the plungers are spring-returned and double-ball intake and delivery valves are used in the pump. In the model now being made there are thirty separate plungers. A corresponding number of flexible steel tubes  $\frac{5}{32}$  in. in diameter are carried along the chassis members and the ends fitted into the holes left vacant when the grease cups are removed. The ends of the tubes are fitted with unions each containing a spring ball check which holds the oil in the system and prevents leakage after the pressure has been removed.

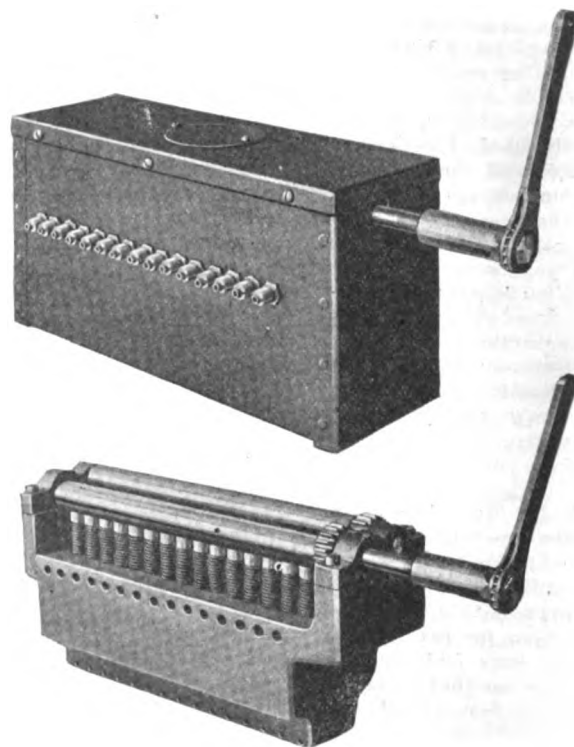


*Left—Section through Semco-Skelly lubricator. Right—Method of fitting oil tubes to shackle bolts and section showing ball check in each union*



## Hand Pump and Reservoir with Flexible Tube Supply Oil to All Bearings

The points reached by this system include all spring shackle bolts, steering heads, brake connections, pedals, rear axle spring pads, etc. In the case of the shackle bolts, the tubes are led to the inside of the bolts instead of outside, which is the usual position for grease cups, so that they can be carried along the inside of the frame members, where they are out of sight. At practically all other points the union fitted to the end of the tube is simply screwed into the grease cup hole. The tubes are clipped to the chassis members and taped to obviate any possibility of rattle, and the tube is sufficiently flexible to take care of the relative movement of the rear axle and frame. The rear axle tubes are carried along the radius rods. In the car fitted with this lubricator, in use for more than a year, no trouble was experienced in zero weather.



*Above—Semco-Skelly lubricator. Below—The multiple pump, showing plungers, cams and ratchet handle*

*What the Dealer Must Learn If He Would Sell*

# Industrial Tractors and Trailers

He must know electricity and electrical apparatus—He must become a factory traffic engineer—But if he learns the field there is money in it for him : : : :

By W. W. PACE

*W. W. Pace is advertising director of the Mercury Mfg. Co., Chicago, which makes industrial tractors. He has studied the field of their merchandising. He stated to Motor World that the automotive dealer could successfully handle industrial tractors—which are electrically operated—provided the dealer would do certain things. And at Motor World's request Mr. Pace has set forth his ideas and the results of his experience in the following story.—EDITOR.*

**T**HE automobile industry, one might say, is at a standstill. The gasoline motor truck is in far from a satisfactory condition from a merchandising point of view, primarily, because the great majority of motor trucks being manufactured are being taken by the Government or by Government contractors.

This situation naturally falls hardest on the automobile and motor truck dealer and in order that he may retain his organization he is on the lookout for an allied line to sell while the war continues, and possibly after the war has terminated.

The labor situation in the country to-day has brought to the fore more strongly than ever the industrial tractor, and it is no exaggeration to say that every plant manufacturing such equipment is working at highest possible speed in order to supply the demand.

*The very fact that an industrial tractor is capable of replacing from two to ten or twelve or even more men is making it not only extremely popular but almost indispensable.*

Again, the expense of operating an industrial tractor is less even than the wages of an ordinary day laborer, and is usually figured at about \$2.50 per day, including depreciation, up-keep, interest on investment, charging and repairs.

What could be more natural than that the automobile dealer, temporarily out of a job, should turn to the industrial tractor as a means of at least tiding him over the period during

which the automobile industry will be at a standstill?

However, there seems to be a mistaken idea that an industrial tractor can be sold on the same basis as could the automobile—and *this idea is very far from being the truth.*

The industrial tractor, simple as it is and easily operated as it is, is not in fact sold as a mechanism but rather as a means to an end, *for it is not the tractor which must be sold but rather the method in which it is used.*

What is known as the "tractor-trailer" method is the product of years of study and experimentation, and in practically every case where good judgment is shown in buying the "tractor-trailer" *method is first considered and the proper tractor to accomplish the method is then purchased.*

The idea that any tractor can be turned loose in a plant and accomplish satisfactory results without a study and application of the problem to be overcome is an erroneous one, and it is that tractor builder of to-day who has the best understanding of ways and means who is doing the most satisfactory business.

It so happens that there is but one exclusive industrial tractor manufacturer in the country to-day, and it is no exaggeration to say that this company has spent thousands upon thousands of dollars in perfecting not only the tractor itself but the method wherein the tractor is to be used.

The automobile dealer can go to his prospect and enlarge upon the mileage to be obtained with his machine, put

particular stress upon finish and construction as compared with his competitors, take his prospect for a delightful demonstration ride and get an order by such means, but the industrial tractor salesman, who is not in fact a salesman but rather a transportation engineer, must first show his prospect what can be accomplished by means of the method; must show him the savings it can accomplish; must decide upon the proper trailers and hitch to be used; must reduce to figures the draw-bar pull necessary in the tractor to handle this one particular job; must explain in a vivid and understandable way why the trailer-trucks will follow the track of the tractor around right-angle corners and through narrow aisles; he must be not only a transportation engineer but an electrical engineer as well, entirely competent to talk to the electrical men with whom he will unavoidably come in contact; he must understand the application of alternating and direct electrical currents, and must know the proper charging apparatus to use in every instance. *In a word, he is, as we say, actually an engineer, not only mechanical and electrical, but transportation as well.*

It is a far step from the job of automobile salesman to transportation engineer, as will be readily seen after reading the above requirements, and to think that an automobile or even a truck dealer can expect successfully to merchandise electric industrial tractors without most thorough training and without considerable experience

(Continued on page 38)

A Department of

## BETTER MECHANICS

No. 87

## Tube Vulcanizing and Splicing

**P**UNCTURES and cuts in tubes are repaired by patching. A patch can be successfully vulcanized on any kind of a hole or tear provided it is not too big or the tear is not too extended. When the tube is badly blown out, it is best cut and spliced. These operations are explained separately.

Successful vulcanizing depends on several things:

- 1—Clean rubber surfaces.
- 2—Proper kind of cement to go with the repair stock.
- 3—Intimate contact between the surfaces of rubber to be vulcanized.
- 4—Correct heat for the repair stock.
- 5—Correct timing of the cure.

The joining of the rubber under heat is analogous to the joining of metals by soldering or brazing. In soldering, the surface of the metals to be joined must be free of dirt and grease, a flux must be supplied to assist in joining the metals and the proper heat must be supplied to effect the joining. In vulcanizing, the surfaces of the rubber must be free of soapstone or talc, as this would prevent joining of the rubber just as surely as grease would prevent metals from joining. The "flux" in the case of rubber is the rubber cement.

To properly clean rubber, it should be scoured with sand or emery paper, with a rotary wire brush or with some other abrasive that will remove the outside skin of the rubber and bring fresh rubber into an exposed place. High test gasoline is then used to wash off the particles of old rubber and talc. Ordinary gasoline that is used for automobile fuel is not good for the purpose, as it contains much oil that does not evaporate under ordinary atmospheric conditions, and this oil remaining on the rubber will prevent the joining of the rubber in the cure.

Cement stocks and repair gums are made by a number of tire-repair-materials makers, and they can be bought about as cheaply as they can be made. It is important that the right kind of cement be used with the right kind of gum. If gum put out by one maker is used, get the cement that is designed to work best with it from the same maker.

BY J. HOWARD PILE

There is a certain relation between heat and length of cure. The greater the heat the shorter the cure and vice versa. There are certain limits to the heats to be applied and to the time of the cures. Gums are designed by the makers to cure at a certain heat for a certain length of time, and it is best to go by these rules unless your experience warrants you changing them.

The greater the steam pressure the

higher the heat. The following table gives the temperatures for various pressures within the range of a vulcanizer:

Steam Pressure	Temperature Fahrenheit	Steam Pressure	Temperature Fahrenheit
5 lb.	227.2 deg.	35 lb.	280.6 deg.
10 lb.	239.4 deg.	40 lb.	286.7 deg.
15 lb.	249.8 deg.	45 lb.	292.4 deg.
20 lb.	258.8 deg.	50 lb.	297.7 deg.
25 lb.	266.8 deg.	55 lb.	302.6 deg.
30 lb.	274.0 deg.	60 lb.	307.2 deg.

## Patching a Tube

- 1—Trim off the ragged edges of the hole with the shears.
- 2—Wash out the inside of the tube with high-test gasoline or benzine for

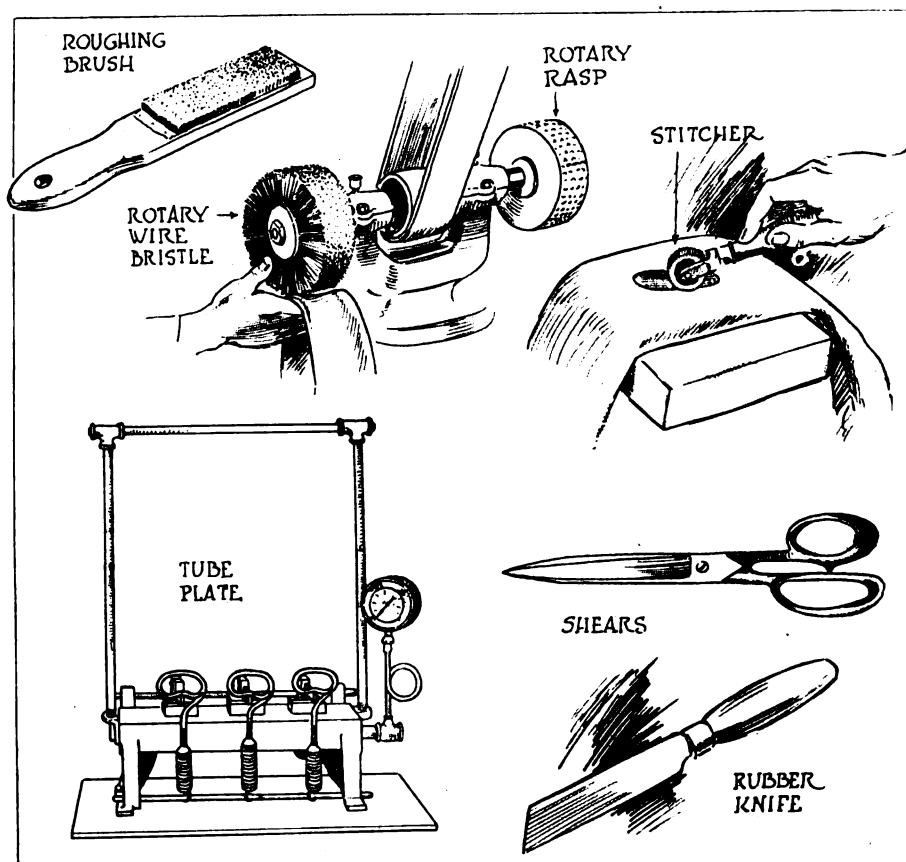


Fig. 1—Tools used in patching and splicing tubes. The mandrels for splicing are not shown here but are seen in Figs. 5 and 6

16—Cure for the length of time recommended for the kind of gum used. This will vary from 5 to 20 minutes at from 50 to 60 lb. pressure.

17—Remove the tube from the plate.

18—Dip the repair in water to bring out the bloom.

19—Test under water to see that there is no leak.

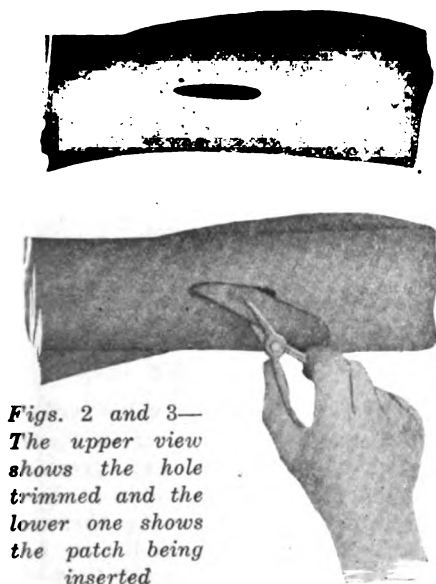
20—If the repair does not cure properly, try a test cure with a piece of the gum. After curing cut off a narrow strip. Pull it and see how it stretches. If undercured, it will not go back to its original length but will remain stretched. If overcured it will break off short.

#### Splicing a Tube

1—Cut out the damaged section of the tube.

2—Measure the section cut out.

3—Cut a section from another tube the same diameter. Make this section



Figs. 2 and 3—The upper view shows the hole trimmed and the lower one shows the patch being inserted

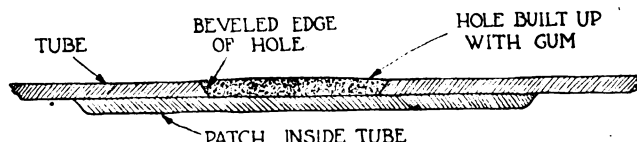


Fig. 4—After the patch is inserted, the hole is built up with repair gum

several inches around the inside of the tube adjacent to the hole. Be sure that all free sulphur or "bloom" is removed.

3—Coat the inside of the tube around the hole with vulcanizing cement.

4—Let this dry thoroughly until all the solvent has evaporated.

5—Cut out a patch of repair gum which is cured on one side only. Make it  $\frac{3}{4}$  to 1 in. larger than the hole all the way round. The raw side goes next to the cemented inside surface of the tube and the cured side goes inside next to the other side of the tube. This is cured on this side to prevent it sticking to the other side of the tube when the heat is applied.

6—Moisten the cured side of the patch with high-test gasoline.

7—Insert the patch.

8—Stitch it by rolling with the stitcher to remove air bubbles and get the surfaces of the rubber in intimate contact with each other.

9—Cut out a piece of repair gum (uncured) the size and shape of the hole and place this in the hole. If it does not quite fit, trim it off with a sharp knife or fill in any holes with small cuttings of gum. This must be built up exactly level with the top of the tube.

10—Wash off the outside of the tube around the repair with a rag saturated with gasoline.

11—Dust the new gum with soapstone from a muslin bag.

12—Cover the tube plate with a sheet of Holland.

13—Place the repair on top of the Holland.

14—Place a block of rubber about the size of the patch over the repair.

15—Let the pressure bar down and latch the handle if it is of the spring type. If of the weight type, the weight will be sufficient.

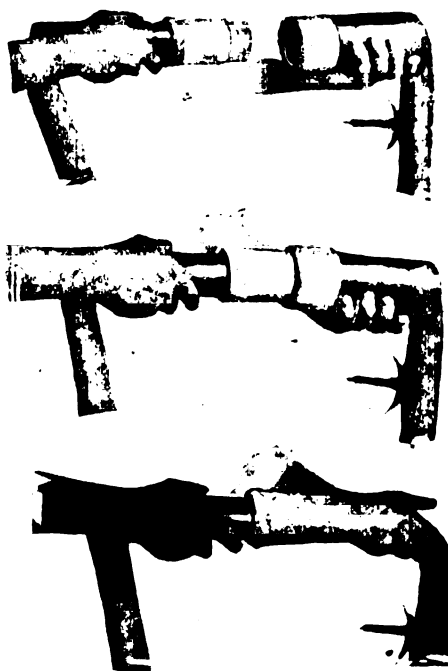


Fig. 5—Steps in splicing the tube

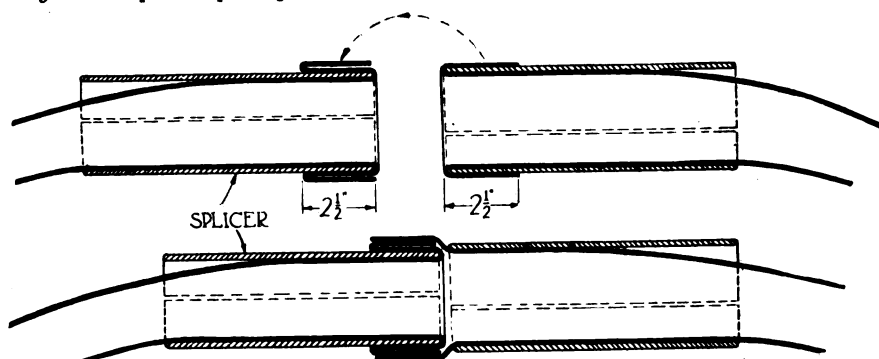


Fig. 6—Sectional views of the mandrels with the tube and section in place



Fig. 7—Stitching down the valve patch, the valve having been pushed through

5 in. longer than the old section cut out. This will allow an overlap of  $2\frac{1}{2}$  in. on each end. It is important to mark the distances so as to get the tube the same length as it was before. A variation of  $\frac{1}{4}$  in. or a little more will not hurt much.

4—Put the ends of the tube through the mandrel or splicer and bevel the edges to make a thin workman-like job.

5—Buff the ends of the tube back  $2\frac{1}{2}$  in. on the outside.

6—One end of the section is to be put on the mandrel and turned back  $2\frac{1}{2}$  in.

7—The end of the tube is to be put on another mandrel and turned back 5 in., then turned back toward the end  $2\frac{1}{2}$  in., thus making a double overlap.

8—The inside ends of the section are to be buffed.

9—After the tube and section have been placed in position on the mandrels, apply two coats of acid vulcanizing cement, allowing the cement to dry thoroughly after each application. Give the first coat 10 or 15 min. and the second coat about 1 hr.

10—See that the tube is not twisted.

11—Bring the two mandrels together.

12—Apply acid solution to the ends with a brush.

13—Quickly transfer the end of the tube on the female mandrel to the end of the male mandrel.

14—Wrap the spliced ends with strips of inner tubing, stretching the strips so that they exert pressure on the joint.

15—Leave in this condition 15 to 20 min.

16—Remove the pieces of rubber and the splice is complete.

#### Applying a Valve Patch

1—Remove the fittings from the valve.

2—Force the valve back inside the tube.

(Continued on page 38)



# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1573—PACKING SHEARS

This is a pair of shears for cutting sheet packing and other tough material. The serrations are filed with a triangular file after the temper has been drawn and the jaw is then again hardened and tempered. The serrations keep the material from slipping along the jaw, a drawback when cutting this kind of material with ordinary shears.—Charles H. Willey, Concord, N. H.

## No. 1574—DRILL EXTENSION

An extension for a straight-shank drill is made by filing the top portion of the shank flat, making it semi-circular. A socket is made to fit this by drilling a hole in the end of a piece of rod, the hole being the same diameter as the shank of the drill. Just above the top of the hole, the rod is filed flat for half the diameter, the flat part of the drill shank fitting into this and being kept from turning by it.—Charles H. Willey, Concord, N. H.

## No. 1575—FOOT SWITCH FOR TANK LIGHT

To allow the electric light over the tube-testing tank to be turned on and off with the foot, an old starting switch is installed under the bench in a place that the workman can easily reach with his foot. This is wired up in series with the leads to the lamp. When the switch is pushed down the lamp lights, and when the foot is removed the lamp goes out.—David G. Gay, Gay Bros., Madison, Wis.

## No. 1576—DOUBLE CALIPERS

A pair of calipers with two sets of legs is made by slitting and forging the end of a piece of flat steel  $\frac{3}{4} \times \frac{1}{8}$  in. The slit should be about 5 or 6 in. The legs thus formed are curved to shape and tapered and the movable legs are made and riveted to the shank of the device so that the points of the two sets of legs will meet properly. The back end is formed into a convenient handle.—Ora Shuck, Corydon, Ind.

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

1—Describe the shortcut briefly but clearly, in few words.

2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.

3—Write on ONE side of the paper only.

4—Sign your name and initials, the name of the company you are with and the town.

*Write plainly. If your name is unusual, print it in capital letters.*

## No. 1577—CRANK FOR STRIPPING FABRIC

A crank for stripping fabric from casings to be repaired or rebuilt is made from a piece of  $\frac{3}{8}$ -in. cold-rolled steel 20 in. long. The long end is slit with a hack saw for  $3\frac{1}{2}$  in. and the entrance to the slit beveled with a file. By starting a piece of the fabric in the slit and turning the crank, it will roll the fabric off the casing.—E. A. Lindell, Busch Garage, Inc., Red Wing, Minn.

## No. 1578—BENDING FIXTURES FOR BENCH VISE

A bench vise is utilized for bending different kinds of material by attaching fixtures of various shapes to the side and bending the material over a bar held in the jaws. A hole is drilled and tapped in the side of the vise and into this are screwed the eyebolt for round stock or either of the other fixtures for flat or angle stock.—Charles H. Willey, Concord, N. H.

## No. 1579—ROCKER-ARM LIFTER

A lifter for overhead-valve rocker arms is made from a piece of  $\frac{5}{8}$ -in. cold-rolled stock 15 in. long, grooved on the end by drilling a  $\frac{5}{16}$ -in. hole 2 in. deep and then sawing through the middle of the hole and 1 in. beyond. The hook is made of  $\frac{5}{16}$ -in. stock and is riveted through a hole in the tool close to the shoulder. The hook is offset so that the pull will be straight and will not upset the tool.—Joseph D. Tanner, Davis Motor Sales Co., Toledo, Ohio.

## No. 1580—BELT SPLITTER

A device for splitting belts, cutting laces or trimming worn shop belts is made from a carpenter's wood chisel and a couple of pieces of flat steel stock to gage the width. The chisel is secured to the gage by drilling it and holding it to the lug with bolts. The gage lugs on the other side are adjustable through the bolts so that different widths can be cut.—Charles H. Willey, Concord, N. H.

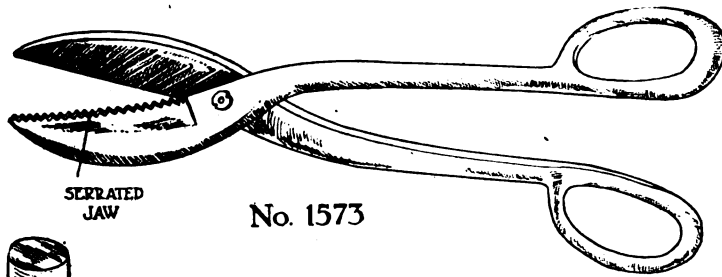
## No. 1581—SOLDERING COPPER WITH ADJUSTABLE HANDLE

A soldering copper which can be adjusted to work in difficult places is made by providing a handle which can be attached to the copper in two positions with screws. The iron shank is made with two lugs at the end at right angles to each other. These are drilled to take the body of the screws and the copper is drilled and tapped to correspond with these holes. By reversing the copper, it is brought into another position.—Charles H. Willey, Concord, N. H.

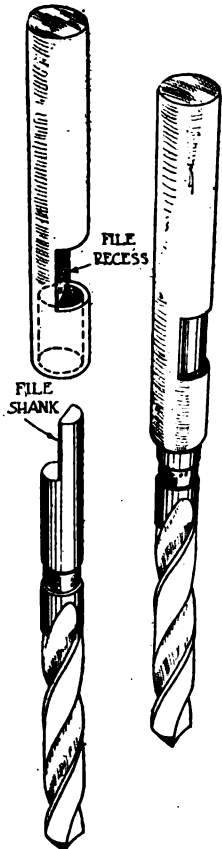
## Veteran Boston Dealer Dies

BOSTON, Oct. 26—Frederick S. Smith, one of the pioneer dealers in Boston, and who has handled the Mercer car here so long that the factory officials have told others seeking the agency, "It belongs to Smith as long as he lives," was buried here yesterday.

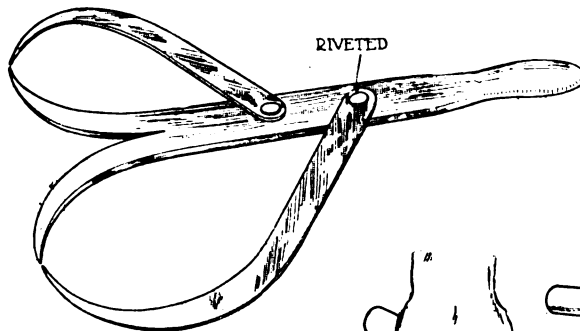
He was another victim of the Spanish influenza pneumonia epidemic. He was widely known in Massachusetts motor circles.



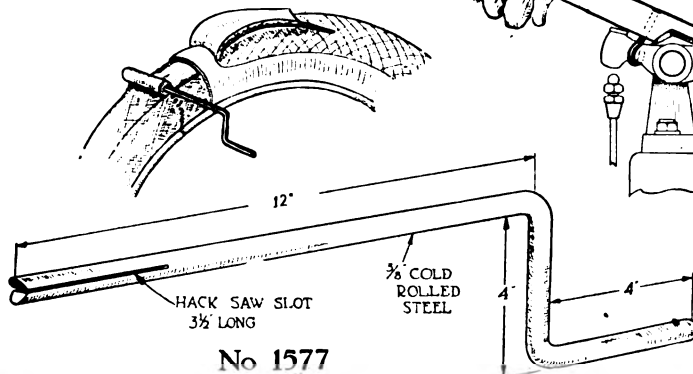
No. 1573



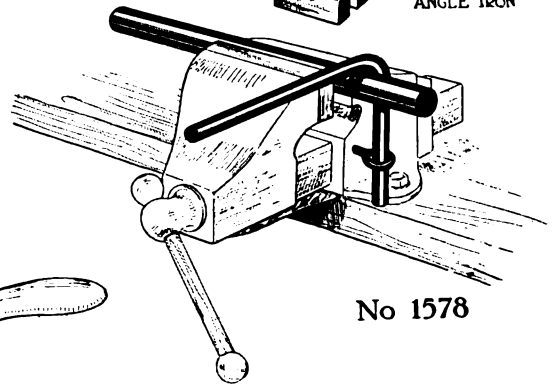
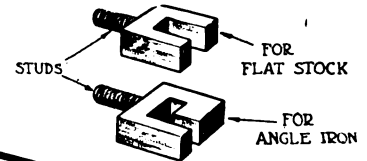
No. 1574



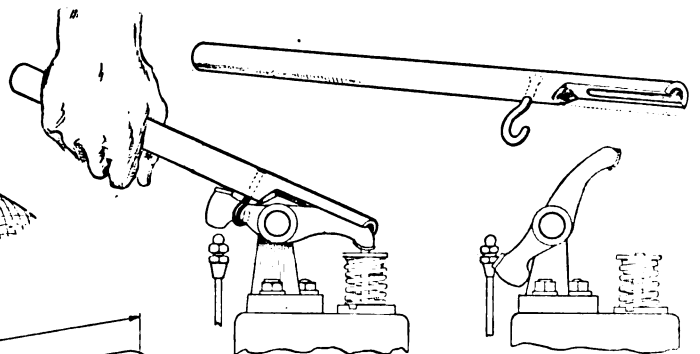
No. 1576



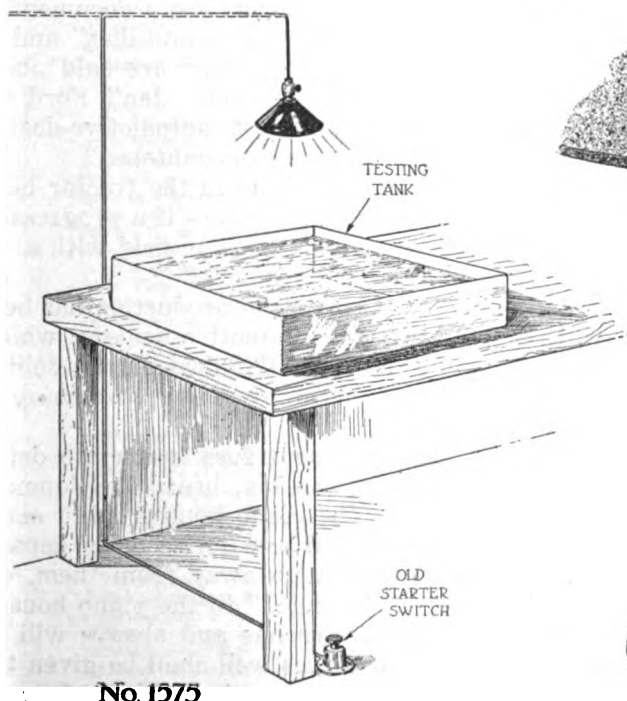
No. 1577



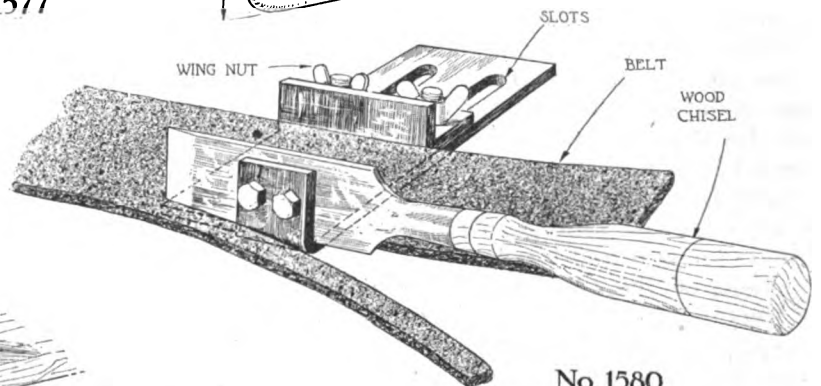
No. 1578



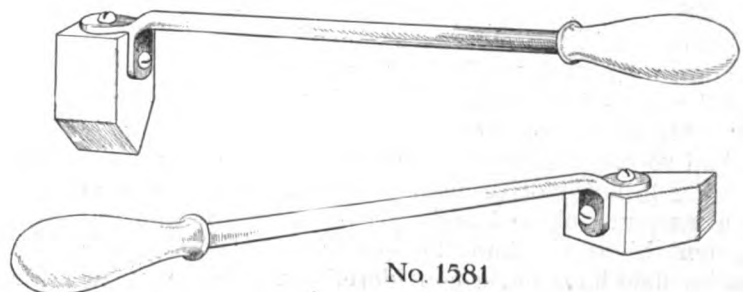
No. 1579



No. 1575



No. 1580



No. 1581

# Editorial Observation

## The March of Progress

**T**HERE is a condition in the tractor field which has the old-line implement people scared stiff. They see the tractor going to the automotive dealer and they're raising a mighty wail. They are even ready to go to dire extremes in their effort to stave off the inevitable.

The whole thing is keyed to service—which the farmer must have—and the maker knows it.

"Have you any service?" the implement manufacturer asks the old-line implement dealer.

"Service?" replies the old-liner. "Never had to give any before. Why should I start now? No! I have no service."

Wherefore the old-line implement maker scratches his head, chews his pencil, figures his profits and prospective profits and decides that he'll stick by the old-line service-less implement dealer for a while longer and see what happens.

But he needn't wait, for what will happen is this: The tractor and power farm implements will be sold by dealers who can give service. If any old-line implement dealer can come out of his barn-like warehouse and learn to give service he will make a good tractor dealer. But the automotive dealer **ALREADY KNOWS** service, and while the old-line tractor maker is fussing around learning his lesson he could lay a sound foundation for the future by placing his agencies with dealers who have spent years in service and have a half-generation start on the old-liners.

There is no argument as to the necessity for service with tractor selling. The makers know it, the farmers know it and the dealers know it. The whole argument of the old-line implement dealers is that the tractor business "belongs" to them because it is a farm implement. Yet the most advanced of their own people tell them it is more of an automobile than an implement and **MUST BE SOLD LIKE AUTOMOBILES**.

Despite this the old-liners continue to assert that the business "belongs" to them, yet they make no effort to play the "service" part that the coming tractor distribution requires.

And so some of the old-line implement makers are turning to automotive dealers, who are making good in a manner unheard of in previous tractor and implement history. And the newer companies in the tractor field have never considered any other than the automotive dealer. All of which causes the old-line implement dealers to see the handwriting on the wall,

pointed out by their own leaders, that they must become modernized, like the automotive dealer, or get out of the way and let the parade go by—*because it's going*.

This has prompted implement dealers of the old school to make odd resolutions in convention. They do not begin constructive campaigns to make themselves better; they merely vituperate and cry out against the automotive dealer.

And some of the old implement and tractor papers lead in this wailing of a class which realizes that it is licked before it starts. A typical wail is set forth on the opposite page. It has to do with a story that appeared in **MOTOR WORLD**, all of which worries **MOTOR WORLD** not a bit and we thank the Eastern Dealer for the free advertising.

The story on the opposite page explains the situation better than anything we could write. We might write volumes as to why it is inevitable that the tractor and power machinery business will go to the automotive dealer, but nothing would more effectively indicate it than does this collection of vituperation.

Dealers probably have noticed that a great deal of attack has been aimed at Henry Ford's tractor. One implement paper is mailing broadcast a document in which Ford's tractor is called a "man-killer" and in which a lot of not very nice things are said about Henry and his son. And why not? Isn't Ford the biggest competitor and biggest automotive-dealer-maker the old-line people have encountered?

Well, if you had been engaged in the tractor business for years, wouldn't you feel sore if a progressive man came along and stepped in your field with a design and output like that of Ford's?

Furthermore, this big Fordson production has been and will be sold through automotive dealers, which, right away, creates an automotive dealer army selling tractors that gives the unprogressives something to worry about.

This tractor and implement fuss is a mere detail when viewed as part of the big, broad development of industrial history. The piano houses didn't serve the public by selling musical accessories so the department stores took the business away from them, despite the fact that it "belonged" to the piano houses. And the same thing always has and always will be the rule. To him who serves well shall be given the job of serving, and he who operates with inefficiency will be discarded in the march of progress.

# The March of Progress?

The "Northway" story shown below is reproduced from the Eastern Dealer of October 3 and is referred to in the editorial on the opposite page

8

THE EASTERN DEALER

## Northway, the Fordson Patriot

**M**OTOR WORLD has a great story about one Northway, of Rochester, N. Y., who was selected by Ford as the angel for Fordson distribution in New York State.

It is well at the start to direct attention to how willing *Motor World* seems to be in passing on the lie about Fordson tractors, and manufacturers who are solicited to advertise in that paper should remember how they back-slap the tractor men by the lie about Northway and Ford.

The story starts off by telling what a hard proposition Northway tackled, for New York is not a tractor State, according to *Motor World*; but Northway is a wizard and he knew about the need of the 500 farms of 3 acres and less in one county, and so Northway grabbed hold and is still holding.

One true part says: "Northway knew little about selling tractors, but he decided to apply motor car selling methods." When did the motor car people ever try and sell cars by the lying route?

One funny part is the story that no one made a profit on Fordsons. One thousand were to be sold. Ford named \$750.00 as the "factory costs," and, of course, this meant to the farmer that Ford made no profit. Northway organized a sales division, hired a manager and a lot of expert demonstrators—and a man must be an expert who could make the Fordson appear to work—and, still, Northway made no profit. He was the patriot raised as a savior to the poor farmer of New York State, and *Motor World*, in two pages, tells about this sort of gush.

Those who know Northway just laugh at this feature of Fordson distribution.

Northway called meetings of Ford dealers, and, according to *Motor World*, these dealers placed orders for double the thousand tractors, and not a man made a penny profit.

*Motor World* should start a movement to give a gold service star flag to New York State Ford dealers for their patriotic service in sticking farmers with a tractor that will not work; but, after all, they console themselves with the thought that the farmer will keep his feet warm when the motor is running, for heat is a feature of Fordson tractors.

### A DELIBERATE LIE

*Motor World* prints a deliberate lie when it says: "Northway arranged a conference with Governor Whitman, through whose effort (Governor Whitman's) 1,000 Fordson tractors were set aside (not sold, perhaps) for the farmers of New York State on a no-profit basis."

The men in authority in New York State say this is a lie, and that the State of New York made no such deal; but *Motor World* goes further in printing the lie, by saying, "The Governor and the State Food Commission have co-operated with Northway, and the Food Commission has advised and directed the sale of the tractors."

THE EASTERN DEALER stamps this statement as a lie. It is further declared a lie by the officials of New York State having charge of the important work of increasing food production.

### MERCHANTS, LISTEN TO THIS

The story says: "Letters were sent to Ford dealers, explaining that the tractors were being placed without profit at the factory price of \$750.00, but if the accompanying implements, the Oliver plow and Roderick lean harrow, were sold as part of the outfit, the dealer could make sufficient profit from the implements to warrant a carload order of Fordson tractors."

The reports that come in all show that Ford dealers cut the profit from the implements to make a Fordson sale.

Now we refer to this feature to arouse the implement dealer of New York to action, for nothing equalling this Fordson-Northway deal has ever occurred that will bring more harm to the merchant

than the lie of this matter, and the farmer should be posted on just what it means to him.

Northway confesses, according to the story, that he does not know a thing about tractors, and yet he is a party to a deal to load the Fordson on the farmer without assurance that it will serve the purpose of the farmer.

In every trial held by New York State officials the Fordson has failed against other tractors, and the State of New York only owns three of the Fordsons out of many other makes.

The merchants of New York will do well to force the officials to make a statement on the tractor situation, for, surely, the truth should be told in the interest of all.

*Motor World* carries no paid advertising of the Fordson. Surely, it would not break the law by taking Ford money for the story, but it lays itself open to condemnation by all men who are honest in their effort to sell tractors of merit.

German propaganda, buying of newspapers, etc., has nothing on the effort of Ford and his agents to fool the farmer, but it will fail if the merchants unitedly act.

Get your local paper editor on the job. Get him to tell the Northway story right. If Northway is making a profit the whole scheme falls as a lie, and we can hardly believe him such a patriot as the *Motor World* pictures.

Dealers Must

THE W

## Letters from Readers

### He Liked It

*Editor Motor World: I want to express my appreciation of the thoroughly American business manner in which your publication is edited.*

*Motor World is in thorough sympathy with the automobile dealer and garageman and is doing a great deal of good, especially now, at this trying time.*

*I have just finished reading the Winter Business Number and it is fine. Yours for bigger and better business.—For-*



*Mrs. I. B. Lloyd, who owns and operates a tire repairshop at Santa Barbara, Cal., says there is nothing unnatural or demoralizing in a woman throwing a tire over her shoulder or wearing overalls while at work. She is making a success of the undertaking, and has built up a substantial trade.*

*est Garage, J. R. Flannery, Jr., Teaneck, N. J.*

*P. S.—Be an optimist. Every time I have oysters on the half-shell I expect to see THAT pearl.*

All He Says Is:

"Wee, Wee, Madame"

Editor *Motor World*: Just a few lines to remind you of the young inventor of the electrical socket wrench, Harold Hollingshead. I was drafted in the latter part of April, and have been busy for Uncle Sam ever since. Have been in France now some five weeks and some country it is.

To begin with, the people are in a heathen condition, very ancient and non-progressive, and as the climate is very hot and dry they were very slothful. The buildings are of ancient type, having been built for many years, with narrow streets between.

The principal means of conveyance is the ancient two-wheeled cart drawn by horses and donkeys. Some of the women look very proud as they drive through the narrow streets with their sunbonnets on and the metal on the harness brightly polished. Many of the donkeys are no larger than some of our American dogs, and it looks like an imposition on the animal to be drawing the driver around.

With my moustache the French people think I am a typical Frenchman, and in coming in touch with them they jabber with all their might, thinking that I

understand them. All I say is "Cui, oui, madam."

The French people are very kind and sociable to American soldiers. Wine is the chief product here, and it is a common thing to see a child hardly old enough to walk toting a large bottle of wine around.

There are only two classes of people here, the poor and the rich. The latter live in a large stone or cement chateau, surrounded by large lawns and trees, with a cement base and large fence built around same.

The poorer people usually live around the chateaus and are servants to the people in them. This war, and the American way of doing things, is a great lesson to European people. The only interesting news of the village worth relating is that of an elderly lady, short but broad, chasing her mischievous son, who has been accused of theft, through the main street of the village. The woman made an awful noise as she pursued the lad down the street. Having cornered and caught the boy there was quite a tussle until the lad's clothes, which were well patched, gave way, giving him a chance to escape, leaving parts of his clothes as he left.

The automobile industry in France is far behind the modern American industry. There are no starters on the French cars and they use the original clincher tire. The American chauffeur would be out of place driving French cars, as they are decorated extensively with brass trimmings which would require one-half of his time to keep polished.—Private Harold Hollingshead, Headquarters Detachment, Motor Bat. 314th Ammunition Train, A. E. F.

#### Schools Graduate 3500 Mechanics

KANSAS CITY, Oct. 26—Of the 4000 motor mechanics in training at the three motor schools in Kansas City during the past two months, 3500 have been transferred to various camps, their training completed. No more students will be brought here for the army motor training schools until after the influenza epidemic has passed. While there has been more or less influenza among the soldiers at these schools, the cases and deaths have been, it is said, no more numerous—and perhaps less numerous—than in similar army camps elsewhere. The soldiers were not permitted to visit the congested city districts for the past two weeks, and good care has been taken both of influenza cases and of others. Work has continued, but under conditions harmonious with preventive practice, at the schools.

#### Dealers Invading Mexico

MONTEREY, MEXICO, Oct. 26—Several American automobile and motor truck agencies have been established in Mexico during the last few weeks and negotiations are pending for locating additional agencies in the principal larger cities of the country. The sale of motor trucks also shows a steady increase. An order for six trucks was recently placed in El Paso by a manufacturing concern

## WOMEN!

Send us stories and pictures of your women workers in men's work.

of Chihuahua, and similar orders have also been placed with dealers in Laredo, San Antonio and Eagle Pass by other large industrial establishments of Mexico. The general revival of mining in the principal districts of northern Mexico has served to create an added demand for motor trucks. In the matter of automobiles, the business of buying cars is still confined largely to used vehicles, for the principal reason that orders for new cars are often slow being filled.

#### Simple Plan to Enforce Light Law

BOSTON, Oct. 26—Through the legislative committee of the Bay State A. A.

a very simple method of aiding to solve the perplexing problem of enforcing the headlight glare law has been suggested to the Massachusetts Highway Commission. The law has been on the books 2 years without being enforced except spasmodically, and a big percentage of owners pay no attention to it.

Just now the Highway Commission has started reregistering its cars for 1919. And it is sending out cards to the first few thousand. So the Bay State A. A. officials have sent to the Highway Commission a request that it have typewritten or printed on every registration card the following:

Is your car equipped to obey the headlight law?

Then when the cards come in every one that has No on it is to be held up and the owner notified that he has been disobeying the law, and until he decides to obey it he will not be allowed to register his car. Moreover, he may lose his original number, if it is a low one, and he is anxious to retain it.

### Operates Schools with Women Students Only



Mrs. E. W. Voder, chief instructor, Liberty Training School for Women, Kansas City, Mo.

THE Liberty Training School, exclusively for the training of women in elementary motor work, has been established in Kansas City.

The project was the direct result of numerous inquiries for women to drive trucks, and the promoters were encouraged by the general need for equipping women to take men's places in industry. The owners of the school are operating a civil service school, and also own and operate a garage and repairshop.

The two institutions are in the same building in the business district of Kansas City. Miss Jewell Floe, a graduate of a local automobile training school, is director of the Liberty school, and Mrs. E. W. Voder, also a men's school graduate, is chief instructor.

Miss Floe is entering automotive work as a profession; Mrs. Voder took

the course because of her desire to serve in men's places during the war and is assisting at the school from this motive. She drives her own car. The entrants at this school are not to be trained as expert automotive mechanics; the purpose is chiefly to train women to drive cars, trucks and tractors, and to know how to care for the machines, and make minor adjustments and repairs. The largest response to the first announcement of the school was from firms which needed chauffeurs. The school announces that it will give all surplus profits to the Red Cross during the war.

The company operating the school has a large vacant lot adjoining the Oak-8 Garage at Eighth and Oak Streets, sometimes used for outside storage, which will be devoted to tractor work. H. Coon is manager.



# THE LAW

By George F. Kaiser

*As It Applies to*  
Dealers  
Repairmen  
Garagemen

## Indiana Mechanics' Lien Law

Editor Motor World: Regarding Indiana Mechanics' Lien, as applied to garagemen: What is the opinion or decision on the matter of length of time over which a garage bill for repairs, supplies, etc., has run that can be collected by filing lien within 60 days from date of last items on account?

Does the lien law cover all back accounts or does it only cover the items bought within the 60 days prior to filing the lien?—F. W. T., Boonville, Ind.

Answer—The Indiana Lien Law provides:

"Every person, firm or corporation or others engaged in storing or furnishing supplies for or repairing automobiles, motor trucks or motorcycles shall have a lien for storage charges for furnishing supplies and for repairing.

"Within 60 days after the charges become due, notice of intention to hold a lien must be filed in the recorder's office of the county where the work was done. This notice must contain the amount of the claim and give a description of the vehicle. Liens may be foreclosed in the Circuit Court of the county where the work is done by filing a complaint within one year of the owner's refusal to pay the charges due. Attorney's fees are allowed the dealer when action is brought to enforce the lien. Chap. 167, Acts of 1915.

Under this law not only are all charges for work done within 60 days prior to filing the lien included, but all back charges are included if the last item of work or labor was performed within 60 days of the time that notice of intention to hold a lien was filed in the County Recorder's office.

## Has Right to Resell

In a recent case instituted by a buyer of a motor car against the dealer who had sold him the car, the California courts held that the seller had a perfect right to resell the car upon retaking it and did not lose that right by accepting partial payments after the entire amount of the contract price became due.

The car in this case was sold under an agreement that the buyer was to take the car under a conditional bill of sale and was to pay \$150 in cash and give 22 weekly promissory notes each in the amount of \$100. The notes which were used were as follows:

\$100.00 LOS ANGELES, CAL., July 29, 1914.

One week after date, without grace, for value received, I promise to pay to the order of W. J. Burt Motor Car Company, one hundred dollars, payable in gold coin of the

## The Purpose

of this department is to help our readers smooth out the legal kinks that now and then cause them confusion in their business. What legal knots are you trying to untangle? Mail them to us. We will be glad to help you. In sending queries be sure to include copies of contracts and notes to which you refer.—EDITOR.

United States of America, with interest thereon in like gold coin, from date until paid at the rate of 7 per cent per annum. And in case a suit or action is instituted to collect the money above mentioned or any part thereof, I promise to pay ten per cent on the sum first aforesaid, additional to said amount as attorneys' fees in such suit or action. The above note is given upon and for the consideration that the said W. J. Burt Motor Car Co. have agreed and promised that upon the payment of said note and all other notes outstanding of even date herewith, principal and interest at maturity (time being the essence of this contract) they will sell and transfer to the undersigned, at the price of said principal and interest the one, white, six cylinder Arbrur touring car, factory number 11539, fully equipped, which said W. J. Burt Motor Car Company have this day entrusted to the care of the undersigned. It is admitted and agreed that said property so entrusted is the property of the W. J. Burt Motor Car Company and the legal title thereof is in the said W. J. Burt Motor Car Co. and shall remain in them until they shall make the aforesaid sale and transfer after the principal and interest aforesaid shall be paid.

And the undersigned agrees to return and deliver the said automobile to the said W. J. Burt Motor Car Co. if requested at any time before said sale and transfer in good order.

Principal and interest payable in United States go'd coin at First National Bank, Los Angeles, Cal.

D. I. MAGEE.

The buyer paid 12 notes, and at the time he paid the last one they were all overdue. Some time thereafter the seller retook the car and surrendered all the unpaid notes. After expending \$458 for repairs the dealer resold the car for \$1,400. The court decided that as the seller had properly retaken the car and was legally in possession of it, it had the right to resell it and the buyer had no cause of action for damages against it.

## No Legal Obligation

Editor Motor World: The writer purchased an automobile in Newark, N. J., two weeks ago and, after using it twice, broke down 40 miles from Newark—caused by breaking of a pin in the universal joint. It was necessary to tow the car to a garage in the neighborhood, leaving it there until the agent from whom I bought it could come and repair it.

There was a charge of \$12 for towing and garaging. The break was caused by an imperfect fitting of the pin in the universal at the time the car was made. In fact, the agent from whom the writer purchased the car said that it might be possible there never had been a pin in the joint and that it just stuck together, and at the first severe pull fell apart.

The question I want to ask you is: Who is liable for the \$12 expense? The agent tells me I have to pay this, as the factory would not stand for any expense outside of their own shop. I can see the justice of this; at the same time, it does not seem right that a car should break down the second time it is run, and when it is run less than 300 miles, particularly as the car is a high-priced one and made by a very well-known maker.

I might mention the automobile has the usual automobile warranty.—A. H., Newark, N. J.

Answer—Under the usual and ordinary form of contract which contains the standard warranty which has been adopted by practically all of the motor car manufacturers you are personally responsible for the \$12 which you expended in having the car towed to a near-by repairshop.

Under the form of contract in general use an owner is entitled only to have parts replaced or repaired when they are sent prepaid to the manufacturer and the latter is entitled to reship them C.O.D. as far as freight charges are concerned.

Owners are continually confronted with the same proposition that you are up against, but while possibly there is a moral obligation on the manufacturer's part to pay charges like the one you mention there is no legal obligation.

*It Is Legal*  
To Buy  
WAR SAVINGS STAMPS

# The RETAIL NEWS

## New Truck and Tractor Dealers

The Master Truck Co. has been organized at St. Louis to sell Master trucks. E. P. Mussler is vice-president and manager and W. J. Rapp is service manager. Both were recently with the De Luxe Automobile Co.

The John Lauson Manufacturing Co., New Holstein, Wis., maker of the Full Jeweled kerosene tractor, has appointed the following dealers: W. J. Dabney Implement Co. of Atlanta, Ga.; The Gibbes Machinery Co. of Columbia, S. C.; The Tranter Mfg. Co. of Pittsburgh, Pa.; The Lone Star Motor Co. of El Paso, Tex.; Dan. W. Talt, Decatur, Ill.; The Mountain State Motor Car Co.; W. H. Homes & Son of St. Louis, Mo.; The Consigny Motor Truck Co. of Des Moines, Iowa.

Central Motor Car Sales Co., Springfield, Mo., distributor of Dodge Bros. motor cars, took over the entire line of trucks manufactured by the International Harvester Co., and will distribute this product in the future in eighteen counties in southwest Missouri. This department of the Dodge agency will be in charge of J. B. Shinn and C. E. Ralston.

The Security Motor Co., Kansas City, Mo., has taken the agency for the Stewart 1-ton truck.

The Tractor Sales Co. has been organized in St. Louis to become distributor of the Leader farm tractor. The organizers are F. W. Swap of the More Automobile Co., John Mittendorf of the Leader factory, and W. R. Coyne of the trade school fame. The salesroom is at 2810 Olive Street.

Upham & Schacht, Inc., Milwaukee, Wis., exclusive dealers in motor trucks for the last three years, have decided to concentrate their attention entirely upon the Service truck, for which the firm recently was appointed State distributor. The salesroom and offices will be moved from 495 Broadway and consolidated with the service station at 2602 North Avenue.

The Henderson Auto & Supply Co., 1121-1129 Division Avenue, Grand Rapids, Mich., which recently secured the agency for the Acason, has also taken on the distribution of the Briscoe and the Panhard truck. The company will render service to present owners of Briscoes and Panhards and will carry a stock of repair parts for both lines.

The H. P. Baker Motor Co., Philadelphia, has just obtained the agency for Kelly-Springfield trucks, ranging from one and a half to six tons.

The Thornton-Fuller Automobile Co., Philadelphia, is selling the Graham Bros. truck-builder. This company is distributor for Dodge Bros. and Simplex cars.

Ebert Bros.' Garage is handling the Diamond-T trucks as the Ebert Motor Truck Co., Inc., Philadelphia.

Fanning, Mathis Co., Marmon Motor Car agency, Philadelphia, has obtained the agency for Standard trucks.

The Larson Oldsmobile Co., Philadelphia, has taken the agency for Master trucks.

Samuel Earley Motor Co., Mercer car dealer, Philadelphia, has taken on the sale of Service motor trucks.

L. S. Bowers Co., agent for the Cole 8, has taken the agency for United States trucks.

Franklin B. Futer, Lancaster, Pa., garage owner, has just taken the agency for the Knickerbocker tractor for Lancaster county.

Murray Motor Sales Co., Philadelphia, has been appointed distributor for Schacht

trucks for Philadelphia, eastern Pennsylvania, southern New Jersey, Delaware and Maryland.

La Roche Bros., agents for Velle cars, will add the Velle tractor, which is just being perfected, to their stock as soon as it is ready for market.

The B. L. P. Motor Co., Philadelphia, has consolidated with the Denby Eastern Distributors Co., Inc., to control the entire Atlantic seaboard for the Denby company.

W. Clarke Grieb, Briscoe dealer, Philadelphia, has added the Redden trailer attachment to its passenger car stock.

Overland-Harper Co., Philadelphia, agent for Overland and Willys-Knight cars, has been appointed distributor for Bethlehem trucks for that district.

Guarantee Automobile Agency, Philadelphia, has been appointed agent for Hall trucks.

Cohocksink Truck & Wagon Co., Philadelphia, has been appointed eastern distributor for Oxford trucks.

The Chicago Pneumatic Tool Co., Chicago, has added the following motor truck dealers: J. A. Lester Co., 37 Danforth Street, Portland, Me.; Owens Motor Car Co., Richmond, Va.; Forst Bros., 1315 New York Avenue, Washington, D. C.

W. A. Burr, Ford dealer at Roseburg, Ore., will handle the Fordson tractor in Douglas County.

The Standard Truck Corp., New York, has taken the distribution of Stegeman motor trucks for Greater New York and surrounding territory.

The F. F. Wood Motor Co., 236-238 Ottawa Avenue, Northwest, Grand Rapids, has installed a new truck, tire and service station. The new department will in no way interfere with the sale and service for Ford cars.

McFarlan Garage, Fifth and I Streets, Eureka, Cal., has added a tractor service department.

The Monroe Sales Agency, at 59 Commerce Street, Grand Rapids, Mich., has secured the agency for the Triangle truck.

F. A. Rhodes, Stamford, Conn., has taken the agency for the Triangle truck.

The Clemens Automobile Co., Des Moines, Iowa, will distribute Cleveland tractors in that territory.

Tenison, Blair & Frey Co. of Dallas will distribute Cleveland tractors in that territory.

The Jackson Motor Co., Kansas City, has added the Turner tractor to its line. The company will distribute Turner tractors in Kansas and western Missouri.

The Burwell-Walker Co., Charlotte, N. C., has taken the La Crosse tractor agency for the Carolinas.

The Blum-Dimmitt Co., Savannah and Atlanta, is beginning the distribution of the La Crosse tractor in Georgia.

The Kentucky Master Truck Co. has been appointed distributor for the Master truck and opened an office and salesroom at 628 South Third Street, Louisville, Ky.

Edward M. Riedling, 724 East Market Street, Louisville, Ky., has secured the agency for Winther trucks.

The Callahan-Whiteside Motors Co., Fourth and York Streets, Louisville, Ky., has been appointed distributor for the Auto car in this territory.

The Monarch Auto Co., Brook and Broadway, Louisville, Ky., distributor for the Fordson tractor, has received a shipment of 301 tractors, the largest which ever arrived south of the Ohio River. It required two train loads, consisting of 43 cars, to bring the machines to Louisville.

The Hausman Motor Car Co., 437 South Second Street, Louisville, Ky., has acquired the agency for the Clydesdale truck.

The Colorado Tractor Sales Co., Denver, is Wallis distributor for Colorado and adjacent territory, with headquarters at 1701 Fifteenth Street.

The S-R Truck Co., Denver, Bethlehem distributor, has moved into larger quarters at 1333 Broadway.

## Developments in Garage and Repairshop Fields

Theo. Morris, Aurora, Mo., is going to install a new tire repair station soon. He will be equipped to do vulcanizing and stitching and will charge batteries.

A. F. Bergman and others, Hiawatha, Kan., have arranged with the Hiawatha Manufacturing Co. to install at their plant one of the most up-to-date machine shops and paint shops in northeastern Kansas. There will be ample floor space for 20 cars in the repairshop and for 50 in the paint shop. An oil station is soon to be installed and also a full line of accessories.

The Genco Light Co. has been organized by the Wilson Motor Car Co., St. Louis, to become distributor of the Genco farm light.

The Welsh-McNulty Motor Co., which has had the distribution of the Studebaker automobiles for the past two years for Tulsa and surrounding territory, has opened a salesroom and parts department in Oklahoma City, at 508-A West Main Street. This firm will have the distribution for Studebakers in Oklahoma City and county. C. W. Welsh and Coleman McNulty are the proprietors.

H. Vance, Neodesha, Kan., has opened an automobile paint shop in Ally's new garage, on Fourth Street.

The Cincinnati Auto Specialty Co., Cincinnati, has moved its business to 312 Main Street.

Crain Pump & Lumber Co., Philadelphia, has obtained the agency for the Genco Farm Lighting System for the Philadelphia district.

The Thornton-Fuller Automobile Co., Philadelphia, has moved from 2037 Market Street to its new sales building on the Parkway, below Eighteenth Street.

The American Insulation Co., Philadelphia, will build a garage at 1600 Arch Street.

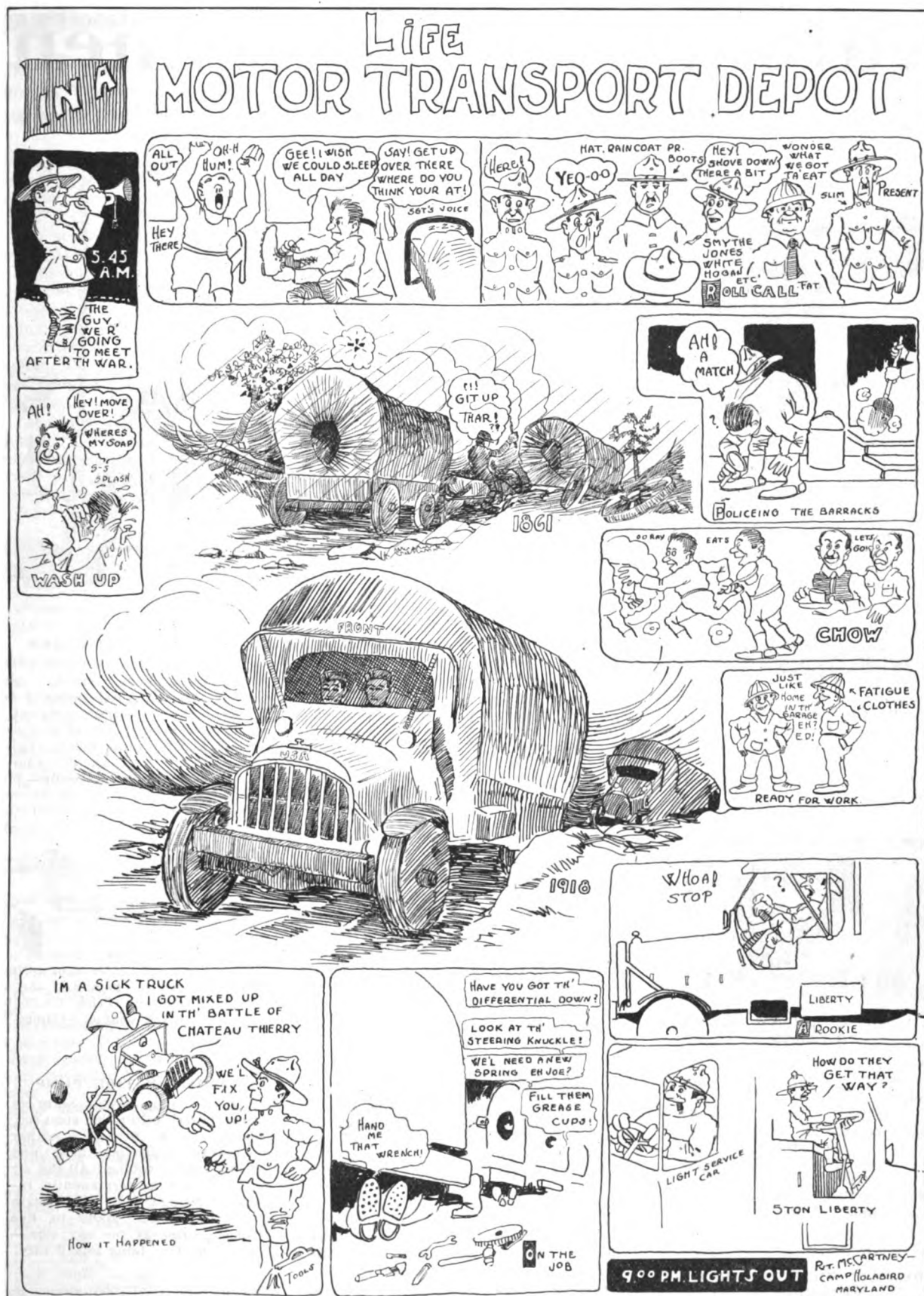
H. H. Yerger, Philadelphia, is building a \$3,000 garage on a site 17 x 125 ft. at Germantown Avenue and Luzerne Street.

The Northern Liberties Realty Co., Philadelphia, will build a garage at 522 North Third Street, on a site 100 x 108 ft.

J. D. Fratheringham, Philadelphia, will build a garage at Pomona Avenue and Foulkrod Street.

### New Garages

E. E. Roper & M. J. Allen...Chanute, Kan.  
Wernert's Garage...Louisiana, Mo.  
Two-In-One Tire Shop...Washington, Iowa  
C. L. Carlson...Stratford, Iowa  
Pearl Kearns...Vinton, Iowa  
G. L. Joneson & Co...Creston, Iowa  
Clyde Miller...Greenfield, Iowa  
Harry B. Harris...Hanover, Kan.  
Claid Linn...Huntsville, Mo.  
Water Tower Garage...Warrenton, Mo.  
Liberty Garage, C. G. Powell, owner.  
Jet, Okla.  
J. H. Jimmerson...Newkirk, Okla.



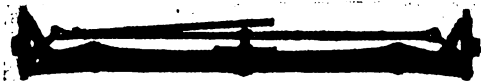
Private C. P. McCartney—from we don't know where—and who used to do—we don't know what—is down at Camp Holabird, Maryland, helping in the finest lot of Winter Business that he ever saw. He has no lack of customers. The shop is always full. The tool equipment is fine—and so are the eats. McCartney slips us this cartoon and we pass it on to you. The mystifying thing to us is how he found time to do it. Write him and his pals a letter and wish 'em luck—everybody

# Automotive Equipment



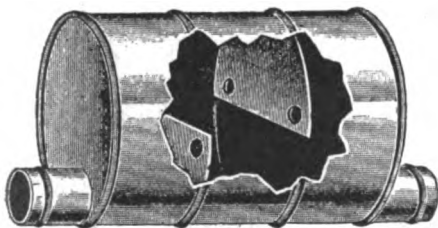
## MILWAUKEE TIMER FOR FORDS

This is a timer for Fords. The case is a one-piece steel stamping coated with copper and nickel plated over this. The contacts are welded to the screw studs and imbedded in the fiber ring. The oil cup is self-locking. Price \$2 complete, or \$1.85 without terminal nuts and oil cup. Packed fifty to a carton.—Milwaukee Auto Engine & Supply Co., 837-841 Twenty-ninth Street, Milwaukee.



## IDEAL STEERING DEVICE FOR FORDS

An attachment which consists of a double-acting spiral spring and clamp which is attached to the center of the front axle and also to the steering rod. Its function is to reduce vibration and to keep the front wheels straight ahead. Price \$3.—Ideal Mfg. Co., Anderson, Ind.

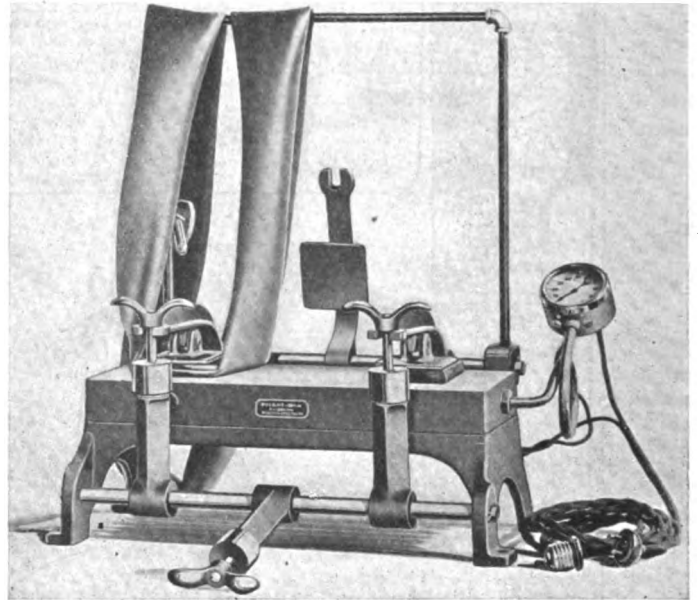


## COOL-FORD AUXILIARY COOLER FOR FORDS

This is a cylindrical auxiliary tank that is connected in the water line between the lower radiator outlet and the water-jacket intake on the Ford. The tank has baffle plates and increases the water capacity of the cooling system one-third. It is made of terne steel, is easily installed and finished in battleship gray baked enamel. Price \$3.—Gray-Heath Co., 1440 Michigan Avenue, Chicago.

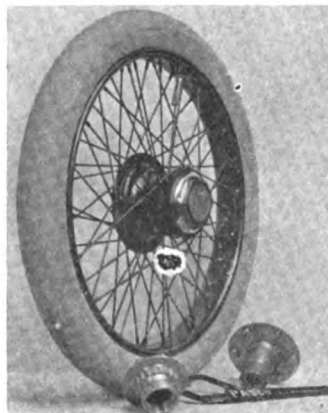
## PERMA-LOC TUBE-PATCHING MATERIAL

This tube-patching material is made of 2 sheets of laminated rubber with a backing of woven fabric. It is in a wide sheet. Three sizes are obtainable, packed in metal cases with the cement. Price 50 cents, \$1 and \$1.50.—Perma-Loc Mfg. Co., Scranton, Pa.



## HEINTZ ELECTRIC-STEAM VULCANIZER

This is a steam tube vulcanizer in which the heat is supplied by an electric element attached to a lighting circuit. The entire device is self-contained and the total water capacity is three pints, which will last for several years without renewal. Made in two sizes, one to hold three tubes at a time and having a capacity of 18 tubes per hour, and the other holding four tubes at a time and having a capacity of 24 tubes per hour. Both machines operate from any 110-volt lighting circuit.—James C. Heintz & Co.

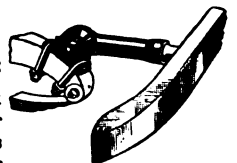


## PASCO WIRE WHEELS FOR FORDS

These are wire wheels for Fords in which the lacing is on a tangent plan, so that every spoke crosses four others both inside and outside. The set comprises five wheels, four inner hubs, hub caps, name plates, wrenches, dust cover for spare wheel and everything ready for immediate installation. The locking device is simple but positive, and insures against the wheels coming off accidentally while the car is in motion. Price \$75 for complete set finished in black enamel, \$80 in color. Spare wheel carrier is furnished at slight extra cost.—National Wire Wheel Wks., Geneva, N. Y.

## GEMCO LIGHT TRUCK BUMPER

This is a light truck bumper for trucks up to 2 tons capacity. The bracket clamps to the front spring horn or other projecting part and the bar is of channel section. Price \$11.74 in nickel, \$10.58 in black enamel.—Gemco Mfg. Co., Milwaukee.



## ANTHONY TIRE PUMP

A tire pump having seam'less steel barrel, cold rolled steel rod, solid brass fittings, leather washers, malleable base and 5-ply rubber tubing. All the air compressed is permanently retained so that none returns with the up-stroke. Made in five sizes. Price \$4 for any size.—Anthony Co., Long Island City, N. Y.



## REVERSIBLE TAPERED E.Z. BACK

A driving cushion made from durable artificial leather and filled with soft, resilient padding. Edges are corded and welted and the cushion is button-tufted. Price \$2.50.—Economy Seat Co., 3132-36 South Canal Street, Chicago.

## Motor Express Routes Being Boosted in Ohio

### Highways Transport Committee Sending Out Questionnaires for Information to Help Them Along

COLUMBUS, Oct. 26—The Ohio Highways Transport Committee has prepared a questionnaire which is being sent to all operators of motor truck routes in Ohio, in order to gather information for the guidance of the committee.

Return loads bureaus are being established in various centers, which will be placed at the disposal of motor transport companies and shippers generally.

The committee is also sending out questionnaires to growers and shippers of farm and garden produce in order to obtain information as to quantity and kinds of farm produce that might be hauled to markets or cities by regularly established motor truck transport lines, known as Rural Motor Express. These questionnaires ask for information as to fixed routes, schedule of stops and charges, etc. Growers of produce are asked to state the produce available for shipment, the present means of getting it to the markets and the incentive to increasing production in case transportation is provided by means of motor trucks.

When the answers to these questionnaires are received the Ohio Highway Transport Committee will be in a better position to map out the work in the State. The district organizations are being completed rapidly, despite the prevalence of Spanish influenza, and the work is going ahead satisfactorily.

The questionnaire to motor truck operators follows:

#### HIGHWAY TRANSPORT COMMITTEE

Ohio Branch,

Council of National Defense

#### SURVEY OF TRUCK OPERATIONS.

Note: Read over carefully before answering. Then go back and answer each question fully.

1. Name of Company.....
2. Address .....
3. Name of Proprietor.....
4. Phone Numbers.....
5. How many trucks do you operate?  
(Answer) Capacity: 1 ton, etc.....  
Number .....
6. How many and what sizes are used in city work?  
(Answer) .....
7. How many and what sizes are used in hauling between cities?  
(Answer) .....
8. (A) Between what points do you operate  
(B) How often? Daily, twice a week, etc.  
1. ....and .....(b).....  
2. ....and .....(b).....  
3. ....and .....(b).....
9. Can you handle more tonnage with present equipment?  
(Answer) .....
10. Will you take night work?  
(Answer) .....
11. What provision do you make for insurance of shippers' goods?  
(Answer) .....

12. What references can you furnish?  
Name .....Address.....  
Name .....Address.....
13. Will you assist in the "Return Loads" Bureau movement?  
(Answer) .....
14. What can the Bureau do to assist you?  
(Answer) .....

Signed .....  
Date .....  
Mail answers at once to .....

#### Merge Four Canadian Companies

OSHAWA, ONT., Oct. 24—An amalgamation that will prove of far-reaching importance to the motor vehicle manufacturing industry has been effected by the consolidation of the McLaughlin Motor Car Co., Ltd., the Chevrolet Motor Co. of Canada, Ltd., and the McLaughlin Carriage Co., Ltd., with the General Motors Co. The arrangement will be effective from Nov. 1.

All the present plants, branch houses and distributing stations in Canada will be operated as heretofore and, in addition, engines, which have formerly been imported, will be manufactured in Canada, together with axles, transmissions and all other important parts. With this end in view the General Motors Co. recently purchased a site in Walkerville, Ont., of 38 acres, where manufacturing operations will be conducted as soon as materials can be obtained and buildings erected. Provision will also be made from time to time to take care of the Canadian business of the Cadillac, Oldsmobile, Scripps-Booth, General Motors trucks and Samson tractor lines.

#### Motor Transport Corps Insignia

WASHINGTON, Oct. 28—The Motor Transport Corps will use a purple hat cord to designate its enlisted men. The hat cords will soon make their appearance, although they are not likely to become common in this country, as the Motor Transport Corps is essentially an overseas organization and the men and officers both go to France shortly after completing their intensive training courses.

#### New Sedan on Allen 41 Chassis

A new sedan body is being built on the standard Allen 41 chassis by the Allen Motor Co., Fostoria, Ohio, the price for the present to be \$1,795. The top and door pillars are permanent, but all the side windows can be completely lowered. The doors are staggered, the left one opening into the driver's compartment and the one on the right into the rear compartment. The sloping windshield is full ventilating and is fitted with an adjustable rain visor.

The front seats are divided and the upholstery is heavy, worsted of a dark gray ground with green figures. A rotary switch on the steering column directly beneath the wheel controls the entire electric system, including starter, ignition, lights and horn. The light for the interior is furnished by an etched center dome light.

## Tractor Prospect Good on the Pacific Coast

### Ventura County Bean Raisers Getting Record Prices—Power in Demand

LOS ANGELES, Oct. 24—Too much competition from other attractions cut down interest in the automobile and truck show held in connection with the Ventura County Fair. Distributors here were induced to enter the show and put 65 different vehicles on display, but tractor demonstrations, horse races and dancing apparently had a much greater appeal to the visitors at the show than did motor vehicles, and consequently the show got a very scant attendance.

Ranchers were unusually busy with the bean harvest, and those who were at the fair during the morning hours put in nearly all their time watching the tractors perform.

Ventura County certainly will be rich pickings for the motor car trade after the harvest season. In 1916 the average price paid for beans was 6 cents per pound, and the producers thought they were enjoying prosperity, as the year before the price had been but 4 cents. This year, however, the price is 12 cents, and practically every bean is sold before harvested.

Separator men are being paid \$12 a day and enginemen \$10. The atmosphere must be absolutely dry for bean threshing and work in the fields usually begins about 10 o'clock in the morning and continues to midnight. Threshing outfits surrounded by electric lights make weird sights as they dot the countryside these nights.

The walnut crop is now being gathered and prices again are higher than ever before. The ranchers are bound to extend the motorization of the farms from this year's profits. Growers are now being paid 32 cents per pound for the choicest nuts and some blanket contracts have been made at 28 cents for the run of the orchard. Ventura County is producing less sugar beets this year than formerly. This is due to inability of price assurance by government mediators and beet lands grow beans just as well and profits are certain with that crop.

#### Field Day for New Jersey Next Fall

NEW BRUNSWICK, N. J., Oct. 29—The New Jersey Agricultural Experiment Station located in this city contemplates holding a farmer field day, a series of farmers' meetings for several days and a tractor demonstration some time during September or October, 1919. The details of the program have not yet been taken up for consideration, but it is expected that there will be addresses by men prominent in the agricultural field and explanatory statements of members of the station staff. Jacob G. Lipman, Dean and Director of the Station, will be in charge of the activities.



## Harry Moock Dealer Association Manager

### Denver Secretary Chosen to Handle Affairs of N.A.D.A. and Will Locate in St. Louis Nov. 1

ST. LOUIS, Oct. 28—Harry G. Moock, secretary of the Denver and Colorado dealer and trade associations, has been chosen assistant secretary of the National Automobile Dealers' Association, and will locate in this city Nov. 1. Moock will have charge of the management of the association's various affairs, relieving the office of President F. W. A. Vesper of much of the detail that has been thrown upon it since the development work of the association assumed such great proportions during recent months.

The new appointment means a permanent arrangement of N. A. D. A. affairs and the beginning of a greater work for the organization. During the preliminary stages much of the work has been done by President Vesper, who is the Buick distributor in St. Louis and has a large business of his own to look after. Despite this he has spent a large percentage of his time during the past year building up the N. A. D. A., and the work had become so great that assistance of a permanent nature was necessary.

When the organization was first ironed out Bart J. Ruddle, secretary of the Milwaukee association, was elected to handle the secretarial work during the preliminary stages. Ruddle is to be relieved of the majority of this detail and will take over larger work, including representation at Washington, where he has on several occasions done effective work. Ruddle was one of the original delegation which went to Washington before the N. A. D. A. was formed, and was a member of the small conference which started the movement.

As the work progressed and the acquisition of membership appeared as the next big job E. E. Peake, secretary of the Kansas City Motor Car Dealers' Association and president of the National Association of Automobile Show Managers, was engaged as executive secretary to handle the membership campaign. This campaign is nearing its end and will be over by the first of the year, at which time Peake plans to return to his own business in Kansas City. Aside from his motor trade activities he has real estate and other successful enterprises.

Moock has done effective work in the intermountain territory in association work and his achievements and ability have for some time been looked upon with favor by President Vesper.

### Two More New Yorkers Add Trucks

NEW YORK, Oct. 28—Two more New York dealers whose activities heretofore have been confined to the passenger car field, have added trucks. The C. T. Silver Motor Co. is now handling the Little Giant line and the Paige-Detroit Co. of New York has added the Sandow.

## That Winter Business Number

Editor Motor World: I want to congratulate you on your issue of Oct. 16. It's certainly a blinger. It contains more real good meat than any other issue I have come across in a good while.

I think the best recommendation is the fact that you unconsciously pick it up and read a little of it every once in a while instead of reading it through and filing it as is most usually the case.

The suggestions contained therein are certainly mighty timely and are sure to be valuable.

With kindest regards I am,

Yours very truly,

F. W. A. Vesper, President,  
National Automobile  
Dealers' Association.

## N. A. D. A. Taking Vote on Convention City

### Cincinnati, New York, Chicago and Denver Want It—Meeting to Be Made a Lively Trade Gathering

ST. LOUIS, Oct. 28—The directors of the N. A. D. A. will decide within a week where the next convention of the association will be held. President Vesper says there is quite an interesting contest for this gathering. Cincinnati, Chicago, New York and Denver would like to have it. St. Louis also is being considered.

"Always before we have held the convention in Chicago during the show," said President Vesper, "but there being no show this year the conditions are changed. Dealers organizations in several cities were quick to see this and have been corresponding with us.

"We are taking a mail vote and expect that the question will be settled during this week, but I cannot say positively when the announcement will be made.

"The directors are planning quite a convention, probably during January. We expect to have a number of the leading men of the trade with us to make speeches and several names have been discussed, but invitations will not be made until the date and place are fixed.

"We expect that there will be quite a gathering for the convention wherever it is held, and it will be quite important for the association to make a good showing, so that its strength will be apparent. We shall hold a number of open sessions, at which the affairs of the trade will be discussed, and there will be closed sessions for strictly association business."

## N. A. D. A. Planning Big Dealer Benefit Works

### Proposes to Ferret Out Troubles of Trade and Give Aid—Has Already Done Numerous Things

ST. LOUIS, Oct. 28—Up to this time the N. A. D. A. has been taking up such troubles as were brought to its attention for adjustment, but beginning now it is out looking for dealers who are in trouble.

The N. A. D. A. wants to become the trouble bearer for the motor car dealers of the country. President Vesper believes there is a solution of most troubles and he believes that his staff can supply the solution.

This platform was promulgated by President Vesper in connection with his announcement that before Nov. 1 the secretary's office would be moved to this city from Milwaukee, and that Harry G. Moock of Denver would come to St. Louis to take up the duties of assistant secretary and general manager.

"Within the last week or so we have had a number of calls from Southern points regarding the classification of garage and service shop help as non-essential," said President Vesper, "and we have had replies that these cases all had been adjusted to the satisfaction of the employer upon our advice.

"Doubtless we have heard of only a few of these, but we are ready and more than willing now to hear from any or all of them. We are organized to help.

"Our first step in this line was sending to all local associations the report made by Executive Secretary E. E. Peake of his visit to Provost Marshal Crowder's office, where the rulings of that office were explained to him in detail. This report was printed in Motor World and has served an excellent purpose. We have sent further copies of this report to every dealer we have heard of who has been in trouble.

"Additional suggestions are included in the current Members' Bulletin.

"As a rule we have found the local troubles of the labor problem were due to over-zealousness of some labor board employee or to recruiting officers, whose advertisements insinuate more than they should. It ought to be understood everywhere that there IS BUT ONE SOURCE FOR A RULING ON WHAT IS NON-ESSENTIAL AND WHAT IS ESSENTIAL, AND THAT IS THE PROVOST MARSHAL'S OFFICE AND HIS RULINGS HAVE NOT BEEN CHANGED AS TO MOTOR CAR EMPLOYEES SINCE THE FIRST RULING MADE IN THE WORK OR FIGHT STATUS.

"In this city just now there are recruiting campaigns under way for Motor Transport men for the Army, for the Red Cross, for the Y. M. C. A. and for the tanks. All of these services want trained motor car mechanics and they are making their advertisements as strong as they can.

"This week one of the men came in from our shop and said to me:

"I see that we are classed as non-essential so I guess I will go and enlist. What service should I pick?"

"I asked him where he got his information as to being non-essential.

"From this advertisement," he replied, handing me one of the ads mentioned. I read it and called his attention that it only seemed to say he was non-essential where he was and then I said:

"If you have any reason for wanting to enlist besides what you have stated, go to it and I will help you. But if you are enlisting only because you think you will be forced into the Army or compelled to change jobs, I can promise you that you are in no danger. The enlistment proposition is one for you to decide solely for yourself."

"That is about the situation all over the country. Either the writers of the ads have over-reached or the persons affected have read too much into the words as they are printed.

"Another question that is up now is the taxes that are to be levied in the new war revenue bill. Of course, just now, we do not know exactly what these will be. We cannot, of course, give definite information on these lines until the bill is finally passed.

"We have sent Secretary Ruddle to Washington, and he will remain there as long as he is needed, which probably will be the duration of the war. With Ruddle at the Capital, we will be in position to give much better service on national questions than we have been.

"Rather a curious question has been raised about the floor tax. It came to us from California, where they sell many automobiles on the partial payment plan, the dealer being protected by a lease, such as time-payment furniture houses use. The point is whether or not the dealer will be compelled to pay a floor tax on all of the machines on which the payments have not been completed.

"That of course is a technical law point that would be a good basis for a suit, but we do not believe that it is the intent of the Government to raise fine questions or to double-tax property. We would suggest that dealers making this kind of sales arrange their books to show that these machines are not for sale and that owners' licenses have been issued for them and that the owner or leaseholder will pay the owners' tax. We do not believe any question will then be raised as it certainly is not the intent to put two taxes on these machines.

"But as soon as the taxes are made certain we can take up these questions and get a definite ruling.

"We hope in the immediate future to issue the bulletin more frequently than we have done in the past. Also we will immediately pass on to members all information that is vital to certain situations by frequent letters if that is necessary. We hope, too, by the time the legislatures meet to take up the question of an anti-theft law, better lien laws and other vital movements. We shall be

## "Business Help?" Read Motor World, Says Vesper

ST. LOUIS, Oct. 28—"Has the N. A. D. A. taken up the question of business helps with the dealers?" President Vesper was asked during an interview this week.

"No, we have not," he said. "That is a matter for the individual. We are willing to offer any advice we can when certain circumstances are presented. But dealers who are readers of trade papers have better information and advice than we could give to them, *if they read these papers as they should. The Winter Business number of Motor World should be all the advice any dealer cares for. He certainly should be able to find a place for himself in those suggestions.*"

ready also to lend our influence to the passage of suitable city ordinances urging the prosecution of thieves, etc.

"Our ability to help in city affairs has been illustrated lately in the respect shown to our requests for certain rulings in Chicago, and the redoubled energy when our influence was added to that of the local association here in St. Louis, as to the need of more vigorous prosecution of thieves and the intimation that an inquiry would be made into paroles. We feel that our field of usefulness to dealers throughout the country is just beginning."

## How N. A. D. A. Advises Dealers

ST. LOUIS, MO., Oct. 28—This telegram and reply illustrate some of the correspondence that has passed between local associations and the N. A. D. A. headquarters recently. The information may be worth while to other associations, as the indications are that the combing out is getting more severe daily:

Telegram to President Vesper of the N. A. D. A.—Have just received a copy of letter quoting a communication from yourself referring to result of a visit of Mr. Peake to the Provost Marshal General's Office, where he went to get a ruling as to the work or fight rule applying to garage-men and garage mechanics. This letter quotes you as saying that—"Any local board, whether it be a draft or labor board, which is classing any work as non-essential, such as the automobile business, is acting directly contrary to the wishes of Provost Marshal General Crowder's office." Kindly advise me at once, by wire collect, whether you are correctly quoted, and if the office of the Provost Marshal has ruled that its regulations are superior to the rulings issued by the local Federal Labor Boards, as relating to the classification of non-essentials.—Elwood Lloyd, Secretary Memphis Automobile Dealers Association.

Vesper's reply—Any board which seeks to declare automobile employees non-essential is positively acting without authority of any kind. The full definition of non-productive labor, contained in the selective service regulations published May twenty-third, Section One Twenty-one K, is only law upon which any board has authority to make classifications. Provost Marshal Crowder's rulings are authoritative. If any of your men are called before any board and told they are non-productive and must change occupations, hire a lawyer, for that board is exceeding its authority under the law.

## Washington Glad to Work with N. A. D. A.

### Dealers in "Home Towns" Made Appeals in Manner Impossible for Manufacturers—Results Big Aid to Trade

ST. LOUIS, Oct. 28—President F. W. A. Vesper, of the N. A. D. A., left yesterday for Washington on invitation of Manager Alfred Reeves, of the National Automobile Chamber of Commerce, to represent the dealers at a conference on matters pertaining to the industry. One of the things President Vesper expects to accomplish on this trip is to tell his confreres in this council on good of the industry how the N. A. D. A. has accomplished certain things.

"Of course the manufacturers have been working hard," he said, "and they are taking full credit. We think that some of the credit that they assume belongs to the dealers. I think our methods of work before the Senate Finance Committee have been very effective.

"We had no chance before the House Ways and Means Committee, because we did not know in advance what was proposed, and the best we could do was to present arguments when we were confronted with the proposal. But we knew the case to be presented against us when we went before the Finance Committee of the Senate.

"Also we tried a new method of getting a hearing. We looked up the several senators on this committee and we went to the local associations in their states and said to them: 'Senator — of your state is on the committee that will pass on the automobile taxes in the war revenue bill. We want your association and such members as feel that they can to write to Senator — in your own way and tell him exactly what these taxes will mean to you. We especially called their attention to the floor tax on parts.'

"Some of the letters that went forward were amazingly effective arguments. For instance, no Eastern man could have written such letters in defense of large parts stocks as did the Western men who are weeks from a mo-

tor car factory and who must carry parts for machines that are years old and yet do wonderful service for the ranchers. There could be no suspicion that such letters as went to Washington were written in any manufacturers' or jobbers' office. They were to the point in a way that showed that they came from the source. As a result they got the attention of the senator who knew that country, while if we had sent them a form letter to send on it would have been tossed aside.

"Also we found that in the ranks of the dealers are men who have been close associates with senators. Other men are related to senators, and also we have within our membership lists presidents of Chambers of Commerce, men who are in the big movements.

"We got the hearing, which was all that we asked, and we convinced the senators that the trade had been hard hit; that it was cheerful about it and ready to win the war, but our greatest victory was to lift ourselves out of the luxury class that certain members of the House Committee insisted upon placing us in.

"We have made some firm friends for the trade among the senators whose attention could not be reached from the manufacturing states, and some of our strongest supporters are those who have been led to see the truth by states that have comparatively small motor car investments but where the motor car is a prime necessity.

"These are some of the things that we do not want the manufacturers to claim credit for."

#### May Not Take Automobile Row

BOSTON, Oct. 26—There is a hitch in the plans to take over many of the motor buildings on Commonwealth Avenue between the Jewish Temple and Lawton Street, and now it begins to look as if the dealers will not have to go scurrying about for places. Rear Admiral Wood, who has charge of the First Naval District, approved the plan and he was anxious to house the sailors there for the next 8 months. But when officials of the Navy Department went over the figures submitted by the Boston dealers, the cost seemed too high. And the department sent word to Boston to look around for other places.

Meanwhile the building on Boylston Street, formerly used by the C. S. Henshaw Co. for Dodge Brothers cars, has been fitted up with cots and the government apparently intends to use that place anyway for a temporary hospital or sleeping quarters.

#### Tractor Training Course

MADISON, Oct. 28—A special course of training in farm tractor construction, maintenance and operation will be given Dec. 2 to 21 by the agricultural engineering department of the University of Wisconsin, at Madison. The course is open to women as well as men, and no age limit will be set. The number of students in the three weeks' course is limited to 50, and as indications already are that there will be an overflow, it is planned to repeat the course early in January.

## "We Will Be Short of Mechanics," Says Vesper—"We Must Train 'Em"

### Substitution of Women Will Not Entirely Solve the Problem—Apprentices and Helpers Must Be Educated

ST. LOUIS, Oct. 28—The heaviest test of motor car selling and service men for the winning of the war is yet to come, according to President Vesper of the N. A. D. A. It will come in the constantly and rapidly tightening labor situation.

"Our only salvation for the immediate future," he said, "is that winter is coming and many cars will be laid up for the winter. Some for patriotic sentiments, some because the gasoline money will be needed for taxes, some because chauffeurs are gone and others because repair bills are high. But whatever the reason, service men should be glad.

"It is going to tax the strength of the trade to keep going the cars that must go and during the winter season we must initiate some means of labor dilution, whereby we can make one experienced, capable mechanic do the work of about six. He must get helpers and drill them as assistants. We will not have time to make mechanics of them.

"The situation is just this," said Vesper. "One of the items in Motor World was reprinted in a paper on the coast. As a result I have here on my desk six applications from men in California for enlistment in the Y. M. C. A. service abroad. None of these could enlist in the army. But they will likely go into the Y. M. C. A. Besides the work for the Y. M. C. A. that I am doing here, Frank R. Tate, the Dodge distributor is enlisting men for similar service for the Red Cross. P. S. Anderson, another former St. Louis motor car man, is enlisting men for the Motor Transport Corps. He is taking men that were not considered for the regular army enlistment. Also the tanks are enlisting men here and are making a strong appeal for motor car men.

"All of these services are asking for just such men as the dealers want in their service shops. 'Trouble shooters' are in great demand.

"Of course we cannot stand in the way of the enlistment of these men but we have got to devise means of keeping cars running. The man who has 600 or more cars running in his community is going to be in a bad situation and he must work his own way out of it.

"I am very sorry to say that the reports that reach me do not indicate that women are the solution. They are a partial solution. They can clean cars and they can take over the jobs in the service shop that are more or less clerical. They are doing this part of the work and are doing it in fine shape. They relieve the man-pressure to that extent.

"But I have not yet found any service shop man who considers the employment of women as mechanics as a success. If you have a lathe or other machinery of that kind in your shop, a woman can and will run that with a man about to see that

the important mechanical part of the work is attended to. But when it comes to straightening axles, tearing down cars and putting them together again, woman is not the solution. She will help, however, if you find the right one.

"I know of one shop that is especially fortunate. It has left, out of a dozen mechanics, a man with a stiff elbow. He is a good mechanic and a leader of men, in his way. He knows the business well and cannot be drafted. He is going to stay on this side. Now this shop can be built up around this man. Already he has a helper who has one foot gone, another with most of a hand gone. These men were not mechanics when he got them and will not be by next spring, but they are willing helpers and have better jobs than they ever expected to have.

"The dilution of expert labor is before every man who employed more than one mechanic in his shop. His first step should be to train his car owners that they must do the little things for themselves. He must not waste good mechanical help in scraping spark plugs or taking dents out of fenders.

"The job before the repairmen now is a great big one and before it is completed it will test the ingenuity, patriotism and business ability of every man in the trade."

#### Racine Sees Tractors Work

RACINE, Oct. 27—More than 2000 persons, mostly farmers from within a radius of ten miles, attended a tractor plowing contest conducted on the Walker Curtiss farm near Salem, in Kenosha County, Wis., on Oct. 19. The contest covered 40 acres and the course was twice across 50 ft.

#### To Oppose Parts Taxes

BOSTON, Oct. 26—Automobile dealers throughout New England have been asked by the officials of the N. A. D. A. to take up with their Senators and Congressmen the question of taxing parts that are carried in stock, which is just now being considered at Washington as a proposed revenue measure. In Boston a committee comprising John H. Johnson, of the Buick, George B. Kimball of the Hudson, Joseph S. Donovan of the Studebaker and R. B. Nettleton of the Chandler, has been appointed to consider the matter of filing a brief with Senators Lodge and Weeks, and some of the congressmen. Members of the N. A. D. A. from Worcester, Springfield, Portland, Manchester, Providence, Hartford, Concord, Rutland, Bangor and other cities throughout the New England States will do the same thing in their respective districts.

## Government Prices for Quartermaster Trucks

### Complete List of Contracts Placed for Class "B" Vehicles and "A" and "B" Bodies

WASHINGTON, Oct. 25—Following is the complete list, together with prices paid, of orders placed by the Quartermaster Department for class B trucks, class A truck bodies and class B truck bodies. In each contract on the B trucks the Government furnished the eleven major units:

#### B Trucks—Chassis

United Motors Co., Grand Rapids, Mich., 500.....	\$892.00
Signal Truck Co., Detroit, 500.....	960.00
Vim Motor Co., Philadelphia, Pa., 500.....	1,069.83
Winthrop Motor Truck Co., Winthrop Harbor, Ill., 500.....	1,147.50
Brookway Motor Truck Co., Portland, N. Y., 1000.....	1,137.00
Denby Motor Truck Co., Detroit, 1500.....	1,132.57
Lewis Hall Iron Works, Detroit, 500.....	1,137.00
Republic Motor Truck Co., Alma, Mich., 2000.....	1,138.00
Bethlehem Motor Truck Co., Allentown, Pa., 1500.....	1,162.50
Diamond T Motor Car Co., Chicago, 2000.....	1,150.00
Rowe Motor Mfg. Co., Lancaster, Pa., 500.....	1,200.00
J. C. Wilson Co., Detroit, 500.....	1,200.00
Sterling Motor Truck Co., Milwaukee, Wis., 750.....	1,187.50
Indiana Motor Truck Co., Marion, Ind., 1500.....	1,162.50
Clyde Cars Co., Clyde, Ind., 500.....	1,200.00
Maccar Co., Scranton, Pa., 500.....	1,200.00
United States Motor Truck Co., Cincinnati, Ohio, 1500.....	1,162.50
Gramm-Bernstein Motor Truck Co., Lima, Ohio, 2000.....	1,500.00
Service Motor Truck Co., Wabash, Ind., 750.....	1,187.50
Standard Motor Truck Co., Detroit, 750.....	1,187.50
Atterbury Motor Car Co., Buffalo, N. Y., 750.....	1,187.50
Midland Motor Truck Co., Oklahoma City, Okla., 500.....	1,200.00
Velle Motor Corp., Moline, Ill., 2000.....	1,150.00
Selden Motor Truck Co., Rochester, N. Y., 2000.....	1,150.00

#### Class A Bodies

	Prices, including troop seats and export crating.
Auto Body Co., Lansing, Mich., 3000.....	\$112.75
Dort Motor Car Co., Flint, Mich., 1000.....	135.50
Hercules Buggy Co., Evansville, Ind., 2000.....	143.00
Mitchell Motors Co., Racine, Wis., 1500.....	143.00
Grand Rapids School Equipment Co., Grand Rapids, Mich., 1500.....	143.00
International Harvester Co., Chicago, 2000.....	143.00
Glasscock Bros. Mfg. Co., Muncie, Mich., 1500.....	143.00
Kuhlman Car Co., Cleveland, Ohio, 1000.....	143.00
Field Mfg. Co., Owosso, Mich., 500.....	143.00
Mulholland Co., Dunkirk, N. Y., 500.....	143.00
Highland Body Co., Cincinnati, Ohio, 500.....	143.00

#### Class B Bodies

	Prices include troop seats and export crating.
Buick Motor Co., Flint, Mich., 3000.....	\$130.97
W. E. Stewart Body Co., Flint, Mich., 3000.....	130.97
Dunbar Mfg. Co., Chicago, 3000.....	132.00
Chevrolet Motor Co., N. Y., 3000.....	139.50
Biddle & Smart Co., Amesbury, Mass., 3000.....	141.00
Beaudette Co., Pontiac, Mich., 3000.....	150.00
Grand Rapids School Equipment Co., Grand Rapids, Mich., 3000.....	150.00
International Harvester Co., Chicago, 3000.....	150.00
Griswold Motor & Body Co., Detroit, 1000.....	150.00
Dort Motor Car Co., Flint, Mich., 1000.....	150.00
Monroe Body Co., Pontiac, Mich., 1000.....	150.00
Kevstone Vehicle Co., Reading, Pa., 5000.....	150.00

## They Will Stick

KANSAS CITY, Oct. 26—The Buick organization of dealers in Kansas City territory is going to be carried through the coming year with very little change. This rather surprising fact—it was surprising to the Kansas City distributor, too—is not due to any hope on the part of dealers that they will get cars. Contracts are being signed with the express understanding that the branch is not expected to furnish any cars at all.

"We hardly expected many of our dealers to sign up, for this next year," said J. Frank Martin, manager of the Buick Co. at Kansas City. "Indeed, we rather discouraged some of them from signing, because we could not promise deliveries of cars. But nearly all of them have insisted on contracts. They have said that we would be giving them cars some day, and they wanted to hold their territory, and to continue to build up their prestige as Buick representatives. The signing of the contracts means that the dealers will be maintaining their stocks of parts, and giving service on Buick cars, whatever additional means of revenue they may adopt for the period during which cars are not available."

#### May Raise Fees in Massachusetts

BOSTON, Oct. 26—The committee appointed by the legislature to consider the question of motor registration fees comprising Colonel William D. Sohler, chairman of the Highway Commission, James W. Synan and Frank D. Kemp, the other two members of the Board; Secretary of State Albert P. Langtry, and Thomas W. White, commissioner of efficiency, had a meeting and organized with Colonel Sohler as chairman. It has set aside Thursday, November 7, as the date for the first hearing on the subject and members of the various motor organizations and the big dealers in cars, trucks, etc., have been asked to attend. The purpose of organizing the committee was due to the failure by the present legislature to pass bills for an increase in trucks fees and also a sur-tax on motor cars as a war measure. The motorists felt that they were paying their share at least, when half the money received from them was not being spent at all because of the holdup in road construction. And now with the Federal government putting on more taxes they feel there is no justification for a raise at this time. That will be the attitude of the motorists, but as the committee must make a report it is necessary to hold the hearings.

#### Des Moines Abandons Tractor Show

DES MOINES, Oct. 28—Des Moines tractor dealers have abandoned for this season their exclusive tractor show which had been planned for the week of Jan. 13 at the coliseum. A large amount of space had been sold and many arrangements completed, but the restricted deliveries under which some dealers are working combined with certain local conditions caused the dealers to postpone the first show for a year.

## Government Bonds for Roads, Says Schlecht

### St. Louis Distributor Offers an After-War Thought That Seems to Be Worth Trade's Attention

(The comment of readers on this subject is invited.)

ST. LOUIS, Oct. 18—Joseph A. Schlecht, president of the St. Louis Automobile Manufacturers' and Dealers' Association, strongly favors another Liberty Loan. He has been working for the success of the loan just closed, and he hopes and believes that the Fourth Loan will be sufficient to put the Kaiser and autocracy on the run.

The Liberty Loan that Schlecht favors will be to liberate America from the mud and the slavery of bad roads. There are two sides to this proposed loan and Schlecht has worked them out in his own mind somewhat during a recent tour of the dealers of the Mound City Auto & Buggy Co., of which he is president. This is the way he tells of it:

"Recently we suggested to our dealers a line of trucks to help them over the dull passenger car period. A considerable number of the dealers responded but most of them only took on the tractor, and I suggested to them to take on the truck to round out the line. But they answered 'not yet.'"

"Of course I asked what they meant. They explained it in this way: 'This town only needs three or four trucks and it already has two and it would not pay me to take the agency to sell the other two.'"

"But the farmers," I suggested. "No use," came the answer. "The farmer here has no use for a truck. The argument to sell a farmer a truck is that he can reduce his horse stock. We are going to do that by selling him a tractor, but he will keep three horses for hauling. The next reduction is to one horse, which every farm needs, but he will not now go below three horses and he will not buy a truck while he has to keep the three. The reason that he will keep three horses is that he must do most of his hauling in the late fall and winter, when he cannot use a truck on the bottomless roads. Throughout the country most of the roads are merely earth and they are not well cared for. You can't sell a truck to a farmer who does not live on a rock road."

"After hearing this repeatedly," said Schlecht, "I listened more and more to the rural express talk in St. Louis. Here I learned that bad stretches of road here and there were holding back this movement."

"I believe the plan is sound. It is something the country has been wanting. We could catch the people while they have the bond buying habit, and while they are in a frame of mind of having the Government do things and of helping the soldiers. Of course employment would be restricted to soldiers."

### How to Get a Commission

WASHINGTON, Oct. 26—Applications for commissions in the Motor Transport Corps, Division of Military Aeronautics, Bureau of Aircraft Production or other divisions of the Army, will hereafter be handled directly by the Military Training Camps Association offices as established throughout the country.

Applications sent directly to any Army corps will be referred to the association. Journeys to Washington for commissions will be useless, as the applicant will in turn be referred to the association office nearest his home.

The proper procedure for securing a commission, states the new order containing the above rules, is for an applicant to watch the press until the division he is interested in is reported to require officers, and then he may file his application, applying to the nearest association officer, where he will be given complete information and later examined and interviewed.

Men who are particularly qualified for some special service in the Army and who desire commissions may make application in advance of any definite statement of a need for such officers. Following is a list of the offices of the Military Training Camps Association to which applicants for commissions can apply:

New York.....	19 W. 44th St.
Boston.....	Room 330-34 State St.
Philadelphia.....	117 Commercial Trust Bldg.
Atlanta, Ga.....	78 S. Pryor St.
Chicago.....	Consumers Bldg.
Cleveland.....	37 Wade Bldg.
St. Paul, Minn.....	1013 Pioneer Bldg.
Dallas, Tex.....	420 Interurban Bldg.
Kansas City, Mo.,	
New England National Bank Bldg.	
Portland, Ore.....	Corbett Bldg.
San Francisco.....	1020 Mills Bldg.
Los Angeles.....	Van Nuys Bldg., 210 W. 7th St.
Washington, D. C.....	War Service Exchange, State, War and Navy Bldg.

### A Combination Truck and Trailer Business

(Continued from page 14)

loaded; load truck, couple to second trailer and haul third trailer into position close to job, to be loaded. Uncouple it and leave it while truck and second loaded trailer go to discharging point. Unload truck, couple to empty first trailer and leave second trailer to be loaded. Truck, empty, with unloaded first trailer then returns to job or loading point and repeats operation till job is done.

For transportation of materials, the following plan often is followed by concerns operating truck and trailers:

Use three trailers per truck. In the morning the first loaded trailer is taken out by the truck. It is hauled to its destination and uncoupled, the truck returning to the yard where a second trailer has been loaded as the first load was being delivered.

The second trailer then is coupled to the truck and delivered at destination, the truck again uncoupling, leaving the second trailer and returning to the yard for the third trailer, which was loaded

while the second one was being delivered.

Then the third trailer is delivered, and on uncoupling the truck, the first one delivered, then unloaded, is ready to be returned to the yard.

On its return, the truck is uncoupled and brings in the second trailer and the same is done with the third. By that time the first trailer is reloaded and ready for its second trip. By that time, too, the first trailer is reloaded and ready for its second run.

Through this method the truck is kept busy every hour that the operator is being paid to drive it. This system eliminates the highest expense of operating a truck—that of wasted time during the loading and reloading processes, and is the most efficient means of handling a job.

### The Tractor Future

(Continued from page 11)

some of the tractor schools during the winter. All of the large tractor makers conduct these schools, and they are of wonderful value. The salesman who understands his tractor and gets the owner to understand it has solved the service problem.

"Promise the buyer nothing except that this machine is perfect as it stands and will remain so until worn out if properly handled. Accidents probably will happen and he must stand the expense. Keep on hand a stock of the parts that break and wear out and be ready to replace them instantly in the busy season, but do not promise to keep the tractor running for a year.

"Forget the easy promises made in motor car selling. Get down to an efficiency basis such as the war conditions demand. Insist that every man, salesman, owner, expert and everybody else connected with the tractor, give his best and most patriotic efforts to making the deal a closed one when the sale is completed."

### Industrial Tractors and Trailers

(Continued from page 21)

is to expect entirely too much. It is utterly impossible, and the automobile dealer who attempts to merchandise electric industrial tractors without a thorough course of training will find that he has undertaken something that he cannot finish.

On the other hand, what may he expect in the industrial tractor field in case he feels that a few weeks' course of training is worth while?

A careful and critical analysis of the United States with a view of determining how many prospective purchasers of industrial tractors there are shows that about thirty thousand manufacturing plants and transportation companies may be considered as possible prospects for this equipment.

This figure of thirty thousand, however, does not mean that the number of tractors to be sold is limited to any

such a figure. Let us, for instance, as an example, take one of the largest packing houses in the world, located in the Central West. Just a few years ago this great plant bought its first "trackless train," as this type of tractor is known. To-day this same plant has in operation no less than fifty of this type of tractor.

Time and again railroad companies have bought on single orders from two to twenty or thirty tractors, and it seems that their needs in this line are everlastingly growing greater.

We believe that it is no exaggeration to state that at the present time there are places in the United States alone for two hundred and fifty thousand industrial tractors, and, although building for commercial purposes is practically at a standstill at this time, such a condition will not persist for any great period after the war, and the erection of any manufacturing plant of any considerable size means another prospect.

One might almost say that the field is unlimited, inasmuch as the installation of one machine almost invariably means repeat orders, and a dealer will go far before finding a more profitable way in which to expend effort and brains.

It is not our intention to give the impression that the automobile dealer cannot or could not merchandise electric industrial tractors, but we believe he should go into the business with his eyes open and with a thorough understanding of what he will have to contend with. Then, if he approaches the subject in the proper way and is willing to give his time to gain a thorough understanding of the method, and will then use intelligent and persistent effort, he will find that he can build up as profitable a business for himself as he had when automobile production was at its height.

### Tube Vulcanizing and Splicing

(Continued from page 23)

3—Buff the surface of the tube around the opening over the area to be covered by the patch.

4—Clean the roughened surface with gasoline.

5—Apply two coats of acid-curing cement, allowing the first coat to dry 15 or 20 min. and the second coat 20 to 30 min.

6—Apply acid solution to the cemented portion of the tube.

7—Place patch in position immediately.

8—Stitch the patch down with the stitcher.

9—Force the valve back through the hole in the patch and replace the fittings.

10—Screw down the nut snug, but not tight enough to cut into the tube.



## Ford Motor Company Has Its Biggest Year

**Assets Total \$203,749,360, and Surplus Increases \$43,637,821—  
The Statement**

DETROIT, Oct. 24—Notwithstanding the curtailment in automobile production during the greater part of the year, the financial statement of the Ford Motor Co. for its fiscal year, which ended July 31, 1918, shows that it was the biggest year in the history of the company. Its total assets and liabilities amounted to \$203,749,360, which is an increase of \$37,774,458, compared with total resources of \$165,975,002 at the end of the preceding fiscal period, and contrasts with \$132,088,219 July 31, 1916, and \$88,535,840 July 31, 1915.

Current assets aggregate \$137,228,134 against \$112,089,824 July 31 last year, and current liabilities total \$16,603,891, in contrast with \$25,936,159 a year ago.

The statement shows a net working capital of \$120,624,243, compared with working capital of \$86,153,665 at the close of the previous year.

The surplus was \$175,242,728. This is an increase of \$43,637,821 for the fiscal period, and compares with \$131,604,097 July 31 last year, with \$111,960,907 July 31, 1916, and with \$59,135,771 July 31, 1915.

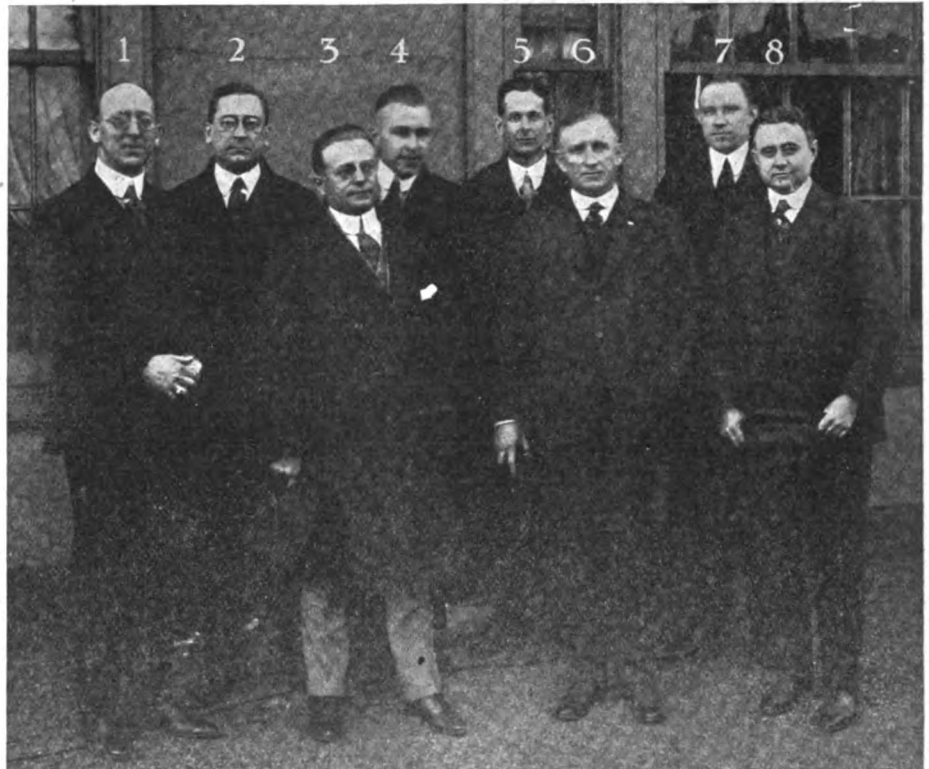
The amount added to the surplus during the year is equivalent to \$2,181.84 a share on the company's 20,000 shares of capital stock of the par value of \$100.

The most remarkable feature of the statement besides the enormous surplus is the large amount of cash receivables, which for 1918 totaled \$91,471,851, as compared with \$64,619,767, or an increase of \$26,852,084. The strength of the company financially is further indicated by a reduction of \$9,329,929 in the total of accounts payable.

Fixed assets, comprising real estate, machinery and equipment, are appraised at \$66,453,345, against \$53,818,541 a year ago, an increase of \$12,634,804 in plant investment during the year.

The statement and comparison with that for July 31, 1917, follows:

ASSETS.		
Real estate.....	\$37,117,363	\$28,180,582
Machinery and equip. . .	29,335,982	25,637,959
Material in process. . .	44,522,562	46,762,457
Cash and receivables . .	91,471,851	64,619,767
Patent rights . . . . .	67,981	66,637
Inventories . . . . .	1,231,906	706,286
Investments . . . . .	1,815	1,314
<b>Totals . . . . .</b>	<b>\$203,749,460</b>	<b>\$165,975,002</b>
LIABILITIES		
Capital stock . . . . .	\$2,000,000	\$2,000,000
Accounts payable. . . .	10,653,327	19,983,256
Accrued expenses. . . .	5,950,564	5,952,903
Depreciation reserve. . .	9,902,841	6,433,936
Surplus . . . . .	175,242,728	131,604,907
<b>Totals . . . . .</b>	<b>\$203,749,460</b>	<b>\$165,975,002</b>



1—F. L. Pierce, Federal Motor Truck Co., director. 2—A. R. Fernald, Willys-Overland, Inc., treasurer. 3—H. T. Boulden, Selden Truck Sales Co., first vice-president. 4—E. T. Herbig, Service Motor Truck Co., secretary. 5—W. D. Wrightmire, Winther Motor Truck Co., second vice-president. 6—J. E. Tracey, Sterling Motor Truck Co., president. 7—A. C. Burch, Clyde Cars Co., director. 8—J. M. Carney, executive secretary, 1344 Wells Building, Milwaukee

## Fordson Distributors Form an Association

PROVIDENCE, R. I., Oct. 28—The Fordson distributors of the United States are banded together in the Fordson Distributors Association of America, with headquarters of the association in this city. The object of the association is to promote the interests of those concerned. The organization was formed in Des Moines in July.

The officers are: President, Clyde L. Herring, Herring Motor Co., Des Moines; treasurer, Thomas J. Northway, Rochester, N. Y.; secretary, Harvey J. Flint, this city. The members are:

Reese Adamson, Birmingham; W. P. Anderson, Torrington, Wyo.; David T. Bussey, Atlanta; Binford-Kimball Motor Co., Ogden; H. L. Bagley, East St. Louis, Ill.; E. H. Bryant, Columbus; Jesse M. Chase, Pocatello, Idaho; F. J. Tumble, Winston-Salem; Oliver Drayer, Texarkana; Hubb Diggs, Ft. Worth; Freeman & Freeman, Little Rock; D. W. Flint, Providence; Graham-Merrin Co., Memphis; W. L. Hughson, San Francisco; G. L. Hudkins, Salina; Frank Jennings, Springfield, Ill.; H. C. Jones, Torrington, Wyo.; Merrill M. Kistner, Watseka, Ill.; T. W. Meiklejohn, Fond du Lac; Wm. F. Moore, Indianapolis; Morriss Bros., Dallas; Alston McCarty, Denver; A. L. Maxwell, Lawrenceville, Ill.; Monarch Auto Co., Louisville; McCord & Satterfield, Macon; E. A.

Mitchell Tractor Co., Seattle; Thos. J. Northway, Rochester; New Jersey Auto Co., Newark, N. J.; G. T. O'Malley Tractor Co., Kansas City; H. D. Rue, Chicago; Robertson & Pearson Co., Houston; M. E. Strieter, Rock Island, Ill.; C. H. Simpson, Nashville; Schmelzel Tractor Co., St. Paul; Spaulding-Richardson Tractor Co., Fargo, N. D.; Tony Sudekin, Nashville; Turner Motor Co., Jacksonville; Universal Motor Co., Richmond; Vollmer Bros., Colorado Springs; E. M. Vanderslice, Tulsa; Vick Bros., Salem, Ore.; S. L. Kirkpatrick, Forest City, Ark.; O. J. Watson Motor Co., Wichita; Bachus Motor Co., Baltimore.

## American Chain President Dies

BRIDGEPORT, Oct. 28—Bishop White, vice-president of the American Chain Co. and treasurer of the Pratt & Cady Co., Hartford, died yesterday at his home in West Hartford of pneumonia. He was 33 years old and is survived by his widow and a son.

## Templar 90 Per Cent on War Work

CLEVELAND, Oct. 25—The Templar Motors Corp. is at present on a 90 per cent war basis, manufacturing a large order of 155 mm. shells. The company is producing a few cars each month, and has enough material on hand to build several hundred more cars.

## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

R. C. Gret has been appointed district representative of the Cleveland Tractor Co. in Oklahoma territory.

Andrew Kirkpatrick, vice-president and secretary of L. V. Fletcher & Co., has resigned to enter the Motor Transport Corps.

Charles T. Jeffery, Kenosha, Wis., who was president, general manager and one of the chief owners of the Thomas B. Jeffery Co., until the interest was acquired by the Nash Motors Co., has accepted a position as one of four superintendents of industrial relations for the Emergency Fleet Corporation. He will have charge of the Delaware River district, with headquarters in Philadelphia.

W. L. Romaine, secretary of the Badger-Packard Machinery Co., Milwaukee, has accepted the appointment of director of the division of oil conservation of the Fuel Administration for Wisconsin.

B. T. McDonald, manager of the Poughkeepsie (N. Y.) works of the Moline Plow Co., Moline, Ill., has temporarily been transferred to Stoughton, Wis., to take charge of the Mandt vehicle branch of the Moline company, during the illness of George Ford. Mr. McDonald was general manager of the Stoughton plant before being placed in charge of the Poughkeepsie works.

U. B. McCurdy has been appointed district manager for the Cleveland Tractor Co., with headquarters at 1307 Waldheim Building, Kansas City.

A. H. Doolittle, formerly sales and advertising manager of the Zenith Carburetor Co., Detroit, has joined the publication division, service department, Bureau of Aircraft, in Detroit.

Major H. O. Bernhardt, formerly production manager of the Pierce-Arrow Motor Car Co., and more recently factory manager of the Harroun Motors Corp., Wayne, Mich., has been promoted to the rank of lieutenant-colonel. He has recently completed an assignment at the plant of the Bethlehem Steel Co., Bethlehem, Pa., for the chief of ordnance, and comes to Detroit representing him as assistant district chief, assigned to the Ford plants at Highland Park and Dearborn.

Elmer H. Hohenthal, formerly associated with the Bosch Magneto Co. and the Simms Magneto Co., has been appointed manager of the Detroit sales and service branch of the Elsemann Magneto Co.

Ben S. Favorite has been appointed manager of the Hupmobile Sales Corporation, Philadelphia. He was associated with the Sweeten Wilmington Co., Wilmington, Del., and formerly was manager of the Barry Motor Co., Washington Hupmobile distributor.

J. K. Gilchrist, who has been acting as Southwestern representative for Edward A. Cassidy Co., with headquarters at Dallas, will, on Nov. 1, become associated with C. L. DuPuy, Southwestern division sales manager of the Selden Truck Sales Co., Rochester. He will for the time being be located at Dallas, in charge of sales for the Texas Truck Co., Selden distributor.

E. E. Gerlinger, who for the past year has represented the Selden Truck Sales Co., Rochester, as Pacific Coast sales manager with headquarters at San Francisco, is no longer connected with the Selden organi-

zation in any capacity. His successor will not be named until after the division sales manager conference to be held early in December.

Grover C. Farnsworth, at one time advertising manager of the former Metzger Motor Car Co., is now an ensign in the naval aviation corps stationed on the eastern coast.

Florence Gardner, secretary to A. A. Gloetznor, sales manager of the Covert Gear Co., Detroit, has been appointed purchasing agent for the Louisiana Motor Car Co., Shreveport, La.

George Crittenden, sales manager of the old Krit company, has been commissioned a lieutenant in the navy.

Douglas G. Halley, formerly connected with the wholesale selling staffs of the Scripps-Booth Corp. and the Studebaker Corp., has been appointed a first lieutenant in the Motor Transport Corps, and is at present stationed at Camp Holabird, Baltimore, Md.

O. E. Harmon has been placed in charge of the service department of Fuller & Sons Mfg. Co., Kalamazoo. M. E. Fuller has been appointed employment supervisor.

Ralph H. Ratliff, advertising manager of the Butler Mfg. Co., Indianapolis, has resigned and will take up farming as his future business.

J. S. Burdick, for the past six years body engineer of the Locomobile Co. of America, Bridgeport, has severed his connection with the company and enlisted in government work for overseas service as automotive engineer in connection with the fuselage of Aircraft Construction.

Lyman P. Clark, sales manager for the Lord Motor Car Co., Los Angeles, Cal., has received an appointment for overseas work with the Y. M. C. A., and has been instructed to report at once to the War Personnel Board at New York City.

## Horses at Low Prices Slow Up Tractor Sales

### Southern California Dealers Have a Problem to Substitute Ma- chinery for Animals

LOS ANGELES, Oct. 28—Declining values in horse flesh have slowed up the tractor business in southern California, according to statements made by some of the most prominent representatives of tractor lines. The horse market is exceedingly dull, and inasmuch as ranchers buy tractors to replace horses they do not seem inclined to part with the horses at a sacrifice.

One of the largest ranchers in this section has a standing offer with two tractor distributors that he will buy four tractors and complete equipment for power cultivation if either of them will find him a market for his 88 head of horses and mules at what he considers a fair value. It used to be that the tractor dealers were disposed to accept livestock as "trade-ins," but that time is passed. They now say to the rancher, "We'll sell you tractors as soon as you are ready for them," and let it go at that.

The bean harvest season is now well on. The Motor World representative visited a large bean ranch near the city a few days ago, and there were 20 wagons engaged in hauling beans for threshing. The separator was being run by a tractor.

## Automotive Securities Quotations

	Bid	Asked		Bid	Asked
Amer.-La France F. E. com....	55	65	Redden Truck Co.....	4	8
Amer. La. France F. E. pfd....	75	..	Reo Motor Car Co.....	17½	18½
Auto Body Co.....	5	7	Republic Motor Truck com....	37	38½
Briscoe Motor Car com.....	10½	..	Republic Motor Truck pfd.....	86	90
Briscoe Motor Car pfd.....	..	60	Saxon Motor Car com.....	8	10
Chandler Motor Car.....	91½	93½	Scripps-Booth Corp.....	23	..
Chevrolet Motor Car.....	149	151	Spicer Mfg. com.....	19	24
Cole Motor Car Co.....	95	105	Spicer Mfg. pfd.....	82	90
*Continental Motors com.....	6¾	7¾	Stewart Warner Speed. Corp....	70½	72½
Continental Motors pfd.....	90	93½	Stromberg Carburetor Co.....	23	30
Edmunds & Jones com.....	11½	15	Studebaker Corp. com.....	63¾	64¾
Edmunds & Jones pfd.....	70	80	Studebaker Corp. pfd.....	94	96
Electric Storage Battery.....	49½	56	Stutz Motor Car Co.....	41	43
Federal Motor Truck.....	31	..	United Motors Corp.....	33½	35½
Fisher Body Co. com.....	41½	43	White Motor Co.....	47¾	48¾
Fisher Body Co. pfd.....	83	87½	Willys-Overland com.....	22½	23½
Ford Motor of Canada.....	190	200	Willys-Overland pfd.....	83	84
*General Motors com.....	131¾	132¾			
*General Motors pfd.....	77½	79½			
Hendee Mfg. Co. com.....	13	20			
Hendee Mfg. Co. pfd.....	75	85			
Hupp Motor Car com.....	3¾	4¾			
Hupp Motor Car pfd.....	80	85			
Kelsey Wheel Co. com.....	23	..			
Kelsey Wheel Co. pfd.....	80	92			
Locomobile Co.....	7	15			
Maxwell Motor com.....	33¾	34¾			
Maxwell Motor 1st pfd.....	62½	63½			
Maxwell Motor 2nd pfd.....	26	27			
McCord Mfg. com.....	28	32			
McCord Mfg. pfd.....	90	95			
Mitchell Motor Co.....	29	32			
Motor Products Corp.....	31	35			
Nash Motors Co. com.....	130	150			
Nash Motors Co. pfd.....	85	90			
National Motor Co.....	8	11			
Packard Motor Car com.....	117	125			
Packard Motor Car pfd.....	91	94			
Paige-Detroit Motor com.....	20	22			
Paige-Detroit Motor pfd.....	8	9			
Peerless Motor & Truck Co.....	14½	15½			
Pierce-Arrow Motor Car com....	43¾	44¾			
Pierce-Arrow Motor Car pfd....	93¾	99½			
Premier Motor Corp. com.....	3	5½			
Premier Motor Corp. pfd.....	..	75			

\*Ex-dividend.  
†Par value \$10.

### Rubber Stocks

Ajar Rubber Co.....	60	62
Firestone T. & R. com.....	120	125
Firestone T. & R. pfd.....	94	96
Fisk Rubber Co. com.....	60	65
Fisk Rubber 1st pfd.....	97	103
Fisk Rubber 2nd pfd.....	79	83
Fisk Rubber 1st pfd. conv.....	90	97
Goodrich, B. F. com.....	56¾	57¾
Goodrich, B. F. pfd.....	100¼	102
Goodyear T. & R. com.....	182	188
Goodyear T. & R. 1st pfd.....	98¾	100
Goodyear T. & R. 2nd pfd.....	100	101½
Kelly Springfield Com.....	56¾	57
Kelly Springfield pfd.....	85	90
Lee Tire & Rubber Co.....	21	22
Marathon Tire & Rubber.....	..	55
Miller Rubber Co. com.....	113	117
Miller Rubber Co. pfd.....	94	96¾
Rubber Products Co.....	123	125
Portage Rubber Co. com.....	50	60
Swinehart T. & R. Co.....	64¾	65¾
U. S. Rubber Co. com.....	103¾	105
*U. S. Rubber Co. pfd.....	..	..

## Total Output of Refineries in U. S. for First Eight Months of 1917

1917	Crude (bbl.)	Other Oils (bbl.)	Gasoline (gallons)	Kerosene (gallons)	Gas and Fuel (gallons)	Lubricating (gallons)	Wax (pounds)	Coke (tons)	Asphaltum (tons)	Miscel- laneous (gallons)	Losses (bbls.)
January	24,839,772		203,618,724	137,248,370	469,596,208	80,941,062	39,558,627	44,627	49,894	27,331,019	941,924
February	23,083,433	no account	184,602,595	129,074,504	446,964,925	54,631,765	36,370,297	42,047	40,619	23,685,686	941,110
March	26,230,138	1st 6 mo.	220,523,571	159,028,978	494,855,838	64,345,221	40,868,930	48,839	52,823	26,977,334	870,380
April	25,894,938	1917	228,945,164	157,826,945	462,846,339	63,218,215	41,037,511	46,099	62,849	30,959,901	957,533
May	27,253,931		238,816,209	147,894,846	504,859,695	65,926,007	38,686,364	43,535	67,612	31,086,377	979,245
June	26,453,210		238,671,746	151,477,333	496,742,434	61,045,757	38,075,280	42,513	67,931	30,205,172	1,011,568
July	26,776,856	2,435,533	244,145,292	161,679,053	599,454,966	64,335,905	40,158,033	42,641	65,272	32,359,401	1,111,511
August	27,900,623	2,376,580	254,464,491	149,528,513	632,151,971	64,107,817	38,999,341	46,240	73,878	92,708,312	1,286,141
Total	208,532,361	4,812,113	1,808,787,792	1,193,758,542	4,107,472,376	498,551,749	313,754,383	356,541	470,878	355,313,202	8,099,412

## Total Output of Refineries in U. S. for First Eight Months of 1918

1918	Crude (bbl.)	Other Oils (bbl.)	Gasoline (gallons)	Kerosene (gallons)	Gas and Fuel (gallons)	Lubricating (gallons)	Wax (pounds)	Coke (tons)	Asphaltum (tons)	Miscel- laneous (gallons)	Losses (bbls.)
January	23,842,587	2,300,334	242,632,044	119,358,184	547,866,248	56,625,425	39,238,858	41,216	54,854	70,995,829	1,078,181
February	23,386,676	2,298,333	234,324,619	121,218,320	510,165,397	58,300,914	35,087,337	42,371	42,033	75,134,088	983,932
March	26,239,662	3,696,872	269,647,968	151,228,007	587,985,804	69,308,351	43,597,019	44,248	56,901	84,865,148	1,097,489
April	26,201,544	3,956,244	293,396,162	153,703,682	578,255,341	71,022,204	40,173,524	45,674	51,242	89,242,012	1,182,020
May	28,510,698	4,112,023	319,391,202	160,590,760	631,586,209	79,589,755	42,544,633	48,864	60,449	88,627,491	1,269,281
June	28,140,479	3,483,270	315,023,445	151,840,252	628,842,033	74,420,996	41,317,794	46,605	50,321	81,110,922	1,282,177
July	29,170,718	5,961,537	332,022,095	156,828,826	658,439,682	79,303,107	41,691,551	48,914	58,433	159,374,139	1,338,304
August	28,534,275	6,376,353	330,335,046	149,678,850	671,113,871	72,892,879	41,829,516	51,759	59,715	163,355,034	1,337,327
Total	214,026,639	32,174,966	2,336,752,581	1,164,446,881	4,814,254,585	561,461,611	325,480,232	369,651	433,948	822,694,663	9,568,971

## Month's Oil Production

## Off; Year Far Ahead

NEW YORK, Oct. 23—The production of both gasoline and crude oil dropped slightly during August as compared with July; but the total production for the first 8 months of 1918 is considerably ahead of the first 8 months of 1917. Stocks of both gasoline and oil have decreased slightly.

During August the daily average production of gasoline was 10,655,969 gal. as against 10,710,390 in July which is a loss of 54,421 gal. Stocks of gasoline on hand as of Aug. 31 are 64,482,066 gal. less than the quantity on hand July 31. During July the production of crude oil fell off 636,443 bbl., the output for August being 28,534,275 bbl. as compared with 29,170,718 bbl. for July. Stocks of oil on hand decreased 1,079,930 bbl. during the month.

The gain in the production of oil and gasoline during the first 8 months is a substantial one. The output of crude was 5,494,278 bbl. greater in the last 8 months than in the same period last year; and the gain in gasoline production for the period was 528,429,280 gal. The stock of kerosene on hand decreased slightly, but the stock of fuel oil increased by approximately 50,000,000 gal. There was also a slight increase in stock of lubricating oil.

Above is a table of the total output of refineries in the United States for the first eight months of 1917 and 1918.

## Boston Raised \$1,368,500

Editor Motor World: I am sending you the results of the campaign in Boston by the automobile and accessory people for the Fourth Liberty Loan, as I feel that you will be interested in the splendid showing made, and if you think advisable will make use of it in a story for some one of your valuable issues.

The total amount subscribed to the Fourth Liberty Loan by the automobile industry of Boston was \$1,368,500. The city was divided into nine zones and a campaign manager was appointed for

each zone (see list attached). Owing to the ravages of influenza no public meetings could be held in Boston during the campaign, which made it all the harder for the solicitors to work, but despite such a serious handicap they went out and got subscriptions to the amount named above.

Charles F. Coe, of the Chevrolet Motor Co., Boston, was the original chairman of this campaign, but was called to war work, so C. P. Rockwell was appointed in his place. Mr. Coe was very active in getting matters started, and it was a matter of regret that he could not continue in the work, but Mr. Rockwell proved to be a very able and patriotic successor in the work.—Boston Automobile Dealers' Association, George D. Berry, Assistant Secretary.

## Boston's Liberty Loan Zones

- Zone 1—J. L. Hamilton, H & H Motor Specialties Co., 755 Boylston street.
- Zone 2—John H. Johnson, Buick Boston Co., 97 Massachusetts avenue.
- Zone 3—J. T. Clinton, Firestone Tire & Rubber Co., 656 Beacon street.
- Zone 4—Ralph B. Nettleton, Chandler Motors of N. E., Inc., 712 Beacon street.
- Zone 5—C. P. Rockwell, C. P. Rockwell, Inc., 640 Commonwealth avenue.
- Zone 6—Karl G. Harig, Ford Motor Co., 98 Brookline avenue.
- Zone 7—J. T. Pace, Packard Motor Car Co., 1089 Commonwealth avenue.
- Zone 8—G. A. Stoneburg, Post & Lester Co., 223 Columbus avenue.
- Zone 9—Ray H. Paddock, Empire Tire & Rubber Co., 79 Massachusetts avenue.

## Help!

BROOKLINE, Oct. 26—One of the teachers in Brookline, the richest town in the United States, was giving her scholars a lesson in perseverance a few days ago.

"What is it," she asked, "that carries a man along rough roads and smooth roads, up hill and down, through the jungles of doubt and the swamps of despair?"

There was a dead silence. Finally one lad, whose father is in the automobile business, raised his hand and spoke up saying:

"Please, ma'am, there isn't any such automobile."

## To Auction Smith Truck Assets

CHICAGO, Oct. 29—The assets belonging to the estate of the Smith Motor Truck Corp., which was declared bankrupt in August, will be sold at auction by Samuel L. Winternitz & Co., at Clearing, Ill., Nov. 15. The inventory value is placed at \$1,000,000 and the assets to be sold include \$150,000 of standard hardware and 2000 tons of cast iron, malleable gray iron, steel machine cast forgings and castings, 200 tons of 1 15/16 in. shafting, 50,000 13 to 24 in. steel sprocket blanks, etc. Included in the specialties for Fords listed in the sale are 10,000 vanadium steel axles in the rough. A large stock of tractor parts will be auctioned off also together with fixtures, etc.

## Coming Events

- Phoenix, Ariz.....State Fair .....Nov. 11-16
- Atlantic City, N. J.....Annual Convention, Automobile Accessories.....Oct. 22-24
- Branch, National Hardware Association of the United States, Marlborough-Blenheim Hotel.
- Pittsburgh, Pa.....Fall Automobile Show, Motor Square.....Nov. 11-16
- Garden, Automobile Dealers' Association of Pittsburgh.
- Akron, O.....Annual Convention, Ohio Automobile .....Dec. 5-6
- Trade Association, Firestone Tire & Rubber Co.'s Club House.
- Des Moines, Ia.....First Tractor Show, Des Moines.....Jan. 13-19
- Thresher & Tractor Club. H. J. Clark, Mgr.
- Kansas City, Mo.....Fourth Annual Tractor.....Feb. 10-15
- Show, Sweeney Bldg., Kansas City Tractor Club. Guy H. Hall, Sec.

# MOTOR WORLD GUIDE

Trucks

Trucks

Name and Model	Tons Capacity	Chassis Price	Cylinder Bore and Stroke	TIRES	Name and Model	Tons Capacity	Chassis Price	Cylinder Bore and Stroke	TIRES	Name and Model	Tons Capacity	Chassis Price	Cylinder Bore and Stroke	TIRES	Name and Model	Tons Capacity	Chassis Price	Cylinder Bore and Stroke	TIRES
A. B. 3T 3	3	4511x4833d	48x33d	34x6	Cellier	M 2	8985	4-31x5	32x4	Cellier	M 2	8985	4-31x5	32x4	Cellier	M 2	8985	4-31x5	32x4
A. B. 5T 5	5	4511x4833d	48x33d	34x6	Columbia	E 1	2275	4-31x5	36x4	Columbia	E 1	2275	4-31x5	36x4	Columbia	E 1	2275	4-31x5	36x4
Acson	B 1	2500	4-31x5	36x4	Commerce	E 2	1450	4-31x5	34x4	Commerce	E 2	1450	4-31x5	34x4	Commerce	E 2	1450	4-31x5	34x4
Acson	H 2	2850	4-41x6	36x4	Concord	A 1	2350	4-31x5	36x4	Concord	A 1	2350	4-31x5	36x4	Concord	A 1	2350	4-31x5	36x4
Acson	L 3	3700	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4
Acson	M 5	4700	4-41x6	36x4	Concord	H 1	4000	4-41x6	36x4	Concord	H 1	4000	4-41x6	36x4	Concord	H 1	4000	4-41x6	36x4
Acson	Light Tractor 6	2950	4-41x6	36x4	Concord	E 1	2000	4-31x5	34x4	Concord	E 1	2000	4-31x5	34x4	Concord	E 1	2000	4-31x5	34x4
Acson	Heavy Tractor 10	4300	4-41x6	36x4	Concord	D 1	2000	4-31x5	34x4	Concord	D 1	2000	4-31x5	34x4	Concord	D 1	2000	4-31x5	34x4
Acme	B 1	1950	4-31x5	34x4	Concord	C 2	3000	4-41x6	36x4	Concord	C 2	3000	4-41x6	36x4	Concord	C 2	3000	4-41x6	36x4
Acme	A 2	2750	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4
Acme	C 3	3650	4-41x6	36x4	Concord	A 3	4000	4-41x6	36x4	Concord	A 3	4000	4-41x6	36x4	Concord	A 3	4000	4-41x6	36x4
Acme	D 4	4050	4-41x6	36x4	Concord	AA 5	4500	4-41x6	36x4	Concord	AA 5	4500	4-41x6	36x4	Concord	AA 5	4500	4-41x6	36x4
American	30 3	3450	4-41x6	36x4	Concord	A 1	2350	4-31x5	36x4	Concord	A 1	2350	4-31x5	36x4	Concord	A 1	2350	4-31x5	36x4
American	C 2	2850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4
American	D 3	3250	4-41x6	36x4	Concord	C 2	3000	4-41x6	36x4	Concord	C 2	3000	4-41x6	36x4	Concord	C 2	3000	4-41x6	36x4
American	F 5	4250	4-41x6	36x4	Concord	AA 5	4500	4-41x6	36x4	Concord	AA 5	4500	4-41x6	36x4	Concord	AA 5	4500	4-41x6	36x4
Armstrong	HW 2	2900	4-41x6	36x4	Concord	A 1	2350	4-31x5	36x4	Concord	A 1	2350	4-31x5	36x4	Concord	A 1	2350	4-31x5	36x4
Armstrong	KW 3	3850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4	Concord	B 2	2850	4-41x6	36x4
Atlas	18 1	1135	4-31x5	32x4	Concord	E 1	1900	4-31x5	34x4	Concord	E 1	1900	4-31x5	34x4	Concord	E 1	1900	4-31x5	34x4
Atterbury	7R 1	2575	4-41x6	36x4	Concord	C-CA 2	2750	4-41x6	36x4	Concord	C-CA 2	2750	4-41x6	36x4	Concord	C-CA 2	2750	4-41x6	36x4
Atterbury	7C 2	2975	4-41x6	36x4	Concord	L 3	3800	4-41x6	36x4	Concord	L 3	3800	4-41x6	36x4	Concord	L 3	3800	4-41x6	36x4
Atterbury	7D 3	3875	4-41x6	36x4	Concord	J 1	1045	4-31x5	34x4	Concord	J 1	1045	4-31x5	34x4	Concord	J 1	1045	4-31x5	34x4
Autocar	21F 1	2050	4-31x5	34x4	Concord	A 1	1775	4-31x5	34x4	Concord	A 1	1775	4-31x5	34x4	Concord	A 1	1775	4-31x5	34x4
Available	1 1	2250	4-31x5	36x4	Concord	B 1	2075	4-31x5	34x4	Concord	B 1	2075	4-31x5	34x4	Concord	B 1	2075	4-31x5	34x4
Available	2 2	2950	4-41x6	36x4	Concord	C 2	2750	4-31x5	34x4	Concord	C 2	2750	4-31x5	34x4	Concord	C 2	2750	4-31x5	34x4
Available	3 3	4200	4-41x6	36x4	Concord	D 2	2150	4-31x5	34x4	Concord	D 2	2150	4-31x5	34x4	Concord	D 2	2150	4-31x5	34x4
Available	5 5	4900	4-41x6	36x4	Concord	E 5	4500	4-41x6	36x4	Concord	E 5	4500	4-41x6	36x4	Concord	E 5	4500	4-41x6	36x4
Avery	B 2	2700	4-41x6	36x4	Concord	D-1 1	1765	4-31x5	34x4	Concord	D-1 1	1765	4-31x5	34x4	Concord	D-1 1	1765	4-31x5	34x4
Avery	B 3	3200	4-41x6	36x4	Concord	D-2 2	2100	4-31x5	34x4	Concord	D-2 2	2100	4-31x5	34x4	Concord	D-2 2	2100	4-31x5	34x4
Avery	A 3	2500	4-41x6	36x4	Concord	D-3 3	2000	4-31x5	34x4	Concord	D-3 3	2000	4-31x5	34x4	Concord	D-3 3	2000	4-31x5	34x4
Barber Tractor	3A 3	2500	4-41x6	36x4	Concord	D-4 4	1650	4-31x5	34x4	Concord	D-4 4	1650	4-31x5	34x4	Concord	D-4 4	1650	4-31x5	34x4
Beach Creek	3A 3	3850	4-41x6	36x4	Concord	D-5 5	2150	4-31x5	34x4	Concord	D-5 5	2150	4-31x5	34x4	Concord	D-5 5	2150	4-31x5	34x4
Bessemer	G 1	1495	4-31x5	34x4	Concord	J 3 2	2925	4-41x6	36x4	Concord	J 3 2	2925	4-41x6	36x4	Concord	J 3 2	2925	4-41x6	36x4
Bessemer	H 1	1945	4-31x5	36x4	Concord	L 3 3	4150	4-41x6	36x4	Concord	L 3 3	4150	4-41x6	36x4	Concord	L 3 3	4150	4-41x6	36x4
Bessemer	J 2	2490	4-41x6	36x4	Concord	R 5 5	4950	4-41x6	36x4	Concord	R 5 5	4950	4-41x6	36x4	Concord	R 5 5	4950	4-41x6	36x4
Bessemer	K 3	3450	4-41x6	36x4	Concord	6 6	5350	4-41x6	36x4	Concord	6 6	5350	4-41x6	36x4	Concord	6 6	5350	4-41x6	36x4
Bethlehem	D 1	1765	4-31x5	34x4	Concord	6 6	5350	4-41x6	36x4	Concord	6 6	5350	4-41x6	36x4	Concord	6 6	5350	4-41x6	36x4
Bethlehem	E 2	2165	4-41x6	36x4	Concord	K-4 4	2985	4-41x6	36x4	Concord	K-4 4	2985	4-41x6	36x4	Concord	K-4 4	2985	4-41x6	36x4
Bethlehem	F 3	3265	4-41x6	36x4	Concord	E 3	4000	4-41x6	36x4	Concord	E 3	4000	4-41x6	36x4	Concord	E 3	4000	4-41x6	36x4
Berne Magnetic	VM 2	3500	4-41x6	36x4	Concord	B-2-18 1	1885	4-31x5	34x4	Concord	B-2-18 1	1885	4-31x5	34x4	Concord	B-2-18 1	1885	4-31x5	34x4
Berne Magnetic	XM 3	4200	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 1	1500	4-31x5	32x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 2	3000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 3	4200	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 4	825	4-31x5	32x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 5	1225	4-31x5	32x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 6	1500	4-31x5	32x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 7	2000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 8	2500	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 9	3000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 10	3500	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 11	4000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 12	4500	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 13	5000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 14	5500	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 15	6000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 16	6500	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 17	7000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 18	7500	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 19	8000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 20	8500	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 21	9000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 22	9500	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4
Brinton	F 23	10000	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4	Concord	2 2	3300	4-41x6	36x4



Name and Model	Tons Capacity	Chassis Price	Cylinder Bore and Stroke	TIMES	
				F.	R.
Studebaker	SP	1 1045	4-12½	35½d	35½d
Studebaker	7	1400	4-12½	35½	35½
Sullivan	E 1	2350	4-12½	36½	36½
Sullivan	E 2	2850	4-12½	36½	36½
Superior	A 1	1600	4-12½	34½	34½
Superior	C 2	2200	4-12½	36½	36½
Tiffin	A 1	1100	4-31½	35½*	35½*
Tiffin	GW 1	2075	4-31½	36½	36½
Tiffin	MW 2	2750	4-12½	36½	36½d
Tiffin	PW 3	4650	6-12½	36½	36½d
Tiffin	RW 5	4850	6-12½	36½	36½d
Tiffin	SW 6	4850	6-12½	36½	36½d
Titan	3	4300	4-12½	36½	36½d
Titan	5	5150	4-12½	36½	36½d
Traffic		2 1195	4-31½	34½	34½
Transport Tractor	N 5	2750	4-31½	34½	34½d
Triangle	A 1½	2155	4-31½	34½	34½
United	AX 1½	2600	4-31½	34½	34½
United	BX 2½	3300	4-12½	36½	36½
United	CX 3½	3900	4-12½	36½	36½
United	VX 5	4700	4-12½	36½	36½
United Tractor		6 2400	4-12½	34½	34½d
U. S.	E 2	2900	4-12½	34½	34½d
U. S.	H 2½	3250	4-12½	34½	34½d
U. S.	J 2½	3500	4-12½	36½	36½d
U. S.	J 3½	3950	4-12½	36½	36½d
U. S.	K 5	4850	4-12½	36½	36½d
Universal	G 1½	1950	4-31½	34½	34½
Universal	D 2	2800	4-42½	36½	36½d
Universal	A 3	3400	4-42½	36½	36½d
Velie	25A 3	2950	4-12½	36½	36½
Velie	26A 3	3900	4-12½	36½	36½d
Vim	21	945	4-34½	31½	31½
Vim	25 1	2195	4-31½	34½	34½
Vim	22 2	3150	4-31½	36½	36½d
Vim	23 3	3950	4-12½	36½	36½d
Walter	F 5	5000	4-41½	40½	40½d
Watson	Tractor 5	4350	4-12½	36½	36½d
White	GBBE 4	2000	4-31½	34½	34½
White	TBC1-1	2300	4-31½	36½	36½d
White	TAD 3	5100	4-31½	36½	36½d
White	TCD 5	4000	4-12½	36½	36½d
Winbait	A 1	1850	4-31½	34½	34½
Winbait	K 1	2000	4-31½	36½	36½
Winbait	L 1A	2350	4-31½	36½	36½
Winbait	B 2	2950	4-31½	34½	34½
Winbait	R 3	2950	4-31½	36½	36½
Winbait	O 3½	3750	4-12½	36½	36½d
Winbait	Q 5	4600	4-12½	38½	38½d
Winlox	X 1	2075	4-31½	35½*	35½*
Winlox	X 1½	2775	4-12½	36½	36½
Winlox	Q 2½	3250	4-12½	36½	36½d
Winlox	P 3½	3850	4-12½	36½	36½d
Winlox	W 5	5000	4-12½	36½	36½d
Wilson	1	1800	4-31½	35½	35½
Wilson	E 2	2900	4-12½	36½	36½d
Wilson	3	3800	4-12½	36½	36½d
Wilson	38 1	4400	4-12½	36½	36½d
Winther	48 2	2250	4-31½	34½	34½
Winther	68 3	3000	4-12½	36½	36½d
Winther	68 3	3800	4-12½	36½	36½d
Winther	88 4	4200	4-12½	36½	36½d
Winther	108 5	5000	4-12½	36½	36½d
Winther	128 6	5250	4-12½	36½	36½d
Winther	148 7	5500	4-12½	36½	36½d
Winther	WD18 1	2000	4-31½	36½*	36½*
Winther	WD18 2	2850	4-12½	36½	36½
Winther	F 1	1825	4-31½	34½	34½
Winther	F 1½	.....	4-12½	36½	36½

Name and Model	Tons Capacity	Chassis Price	Cylinder Stroke	TIRES	
				F.	R.
Sandow	H 1½	2550	4-31x5	34x4	34x6
Sandow	J 2	3250	4-31x5	36x4	36x7
Sandow	K 3	4250	4-41x5	36x5	36x6d
Sandow	W35 3½	3975	4-41x5	36x5	36x6d
Sanford	W25 2½	3000	4-41x5	36x4	36x4d
Sanford	W50 5	4750	4-41x5	36x5	40x6d
Schleicher	3	3500	4-41x5	34x4½	34x3½d
Schleicher	5	4500	4-56x6	34x5	34x5d
Selden	TXL 1	1900	4-31x5	34x4½	34x5
Selden	TWL 1	2100	4-31x5	34x4	34x4
Selden	ICB 2	2750	4-41x5	36x4	36x7
Selden	JWB 2	2950	4-41x5	36x4	36x7
Selden	NL 3½	3650	4-41x5	36x5	36x6d
Selden	DL 5	4850	4-41x5	36x5	40x10
Service	220 1	2100	4-31x5	34x5*	34x4*
Service	240 2	3000	4-41x5	36x4	36x7
Service	270 3	3800	4-41x5	36x5	36x6d
Service	275 3½	4200	4-41x5	36x5	36x6d
Service	305 5	5000	4-41x5	36x6	36x6d
Signal	M 1	2700	4-31x5	34x4½	36x5
Signal	M 1½	2700	4-31x5	34x4	36x5
Signal	M 2	2700	4-41x5	36x4	36x8
Signal	M 3	4100	4-41x5	36x5	40x6d
Signal	M 3½	5100	4-41x5	36x5	40x6d
Standard	70 2	2800	4-41x5	36x4	36x6
Standard	65 3½	3675	4-41x5	36x5	36x6d
Standard	85 5	4650	4-41x5	36x5	40x6d
States	†	650	4-34x4	32x4	32x4
Sterling	2½	3300	4-41x5	36x4	36x4d*
Sterling	3½	4325	4-41x5	36x5	40x6d
Sterling	5	5100	4-41x5	36x6	40x6
Sterling	7	5600	4-41x5	36x6	40x7d
Stewart	6 1	950	4-31x5	32x4	32x4
Stewart	8 1	1575	4-31x5	34x4½	34x4
Stewart	9 1½	1975	4-31x5	34x5	34x5
Stewart	7 2	2575	4-41x5	34x4	34x4

Name and Model	Tons Capacity	Chassis Price	Cylinder Stroke	F.	R.	TIRES
Palmer	1	1685	4-31x5	34x3	34x4	34x4
Palmer	1½	2495	4-31x5	36x3½	36x3½	36x3½
Palmer	A 1	1915	4-31x5	32x3	32x3	32x3
Palmer	B 1	1395	4-31x5	32x3	32x3	32x4
Parker	2	2800	6-31x5	34x4	36x4½	36x4½
Parker	3	3350	6-31x5	34x4	36x5½	36x5½
Parker	4	4000	6-31x5	36x5	40x5½	40x5½
Parker	5	4750	6-31x5	36x5	40x6½	40x6½
Peerless	TC 4	4150	4-41x5	36x5	40x6½	40x6½
Peerless	TC 5	4700	4-41x5	38x6	42x6½	42x6½
Peerless	TC 6	5200	4-41x5	38x7	42x7½	42x7½
Pierce-Arrow	2	3750	4-42x5	36x4	36x4½	36x4½
Pierce-Arrow	5	5500	4-41x6	36x5	40x6½	40x6½
Rainier	1	1350	4-31x4	32x4	33x4	33x4
Rainier	2	1895	4-31x4	32x4	32x4	32x4
Rainier	3	2385	4-31x4	36x5	36x7	36x7
Renovo Tractor	F	3275	4-41x4	34x4	34x4	34x4
Republic	Dispatch	1005	4-31x4	32x3	32x3	32x3
Republic	Special	1205	4-31x6	32x3	32x4	32x4
Republic	10	1485	4-31x6	34x3	34x4	34x4
Republic	11	1775	4-31x5	34x3	34x5	34x5
Republic	12	2100	4-41x5	34x4	34x6	34x6
Republic	V 3	3450	4-41x4	36x5	36x5½	36x5½
Republic	V 5	4750	4-41x6	36x5	40x6½	40x6½
Reya	1	995	4-31x4	31x4	31x4	31x4
Riker	3	.....	4-41x6	36x5	36x5½	36x5½
Riker	Riker	.....	4-41x6	36x5	36x6½	36x6½
Rowe	CDW	3200	4-45x5	34x4	36x3½	36x3½
Rowe	CD 24	3250	4-45x5	34x4	36x4	36x4
Rowe	DEW 3	3800	4-41x6	36x5	36x5½	36x5½
Rowe	DEW 5	4900	4-41x6	36x5	40x6½	40x6½
Rush	FD	895	4-31x5	31x4	31x4	31x4
Sandow	G 1	2050	4-31x5	34x3½	34x5	34x5

Name and Model	Tons Capacity	Chassis Price	Cylinder Bore and Stroke	F. R.	TIRES
Max. AB 1	2400	4x35	36x4	36x34d*	
Max. AB 1	2400	4x35	36x4	36x34d*	
Max. AB 11	2800	4x35	36x4	36x34d*	
Max. AB 11	2800	4x35	36x4	36x34d*	
Max. AB 2	3000	4x35	36x4	36x44d	
Max. AB 2	3000	4x35	36x4	36x44d	
Max. AC 31	4000	4x56	36x5	40x64d	
Max. AC 31	4000	4x56	36x5	40x64d	
Max. AC 51	5250	4x56	36x5	40x64d	
Max. AC 51	5250	4x56	36x5	40x64d	
Max. AC 71	5500	4x56	36x7	40x74d	
Max. AC 71	5500	4x56	36x7	40x74d	
Max. AC 11	4000	4x56	36x5	40x64d	
Max. AC 11	4000	4x56	36x5	40x64d	
Max. AC 15	5500	4x56	36x7	40x74d	
Max. AC 15	5500	4x56	36x7	40x74d	
Manly 30	11	2050	4x31x51	36x4	36x5
Manly 40	2250	4x31x51	36x4	36x5	36x5
Manly 50	24	2800	4x51	36x4	40x7
Master O 2	2300	4x51	36x4	36x5	36x5
Master O 2	2400	4x51	36x4	36x5	36x5
Master A 31	3800	4x6	36x5	40x5d	40x5d
Master W 2	2500	4x51	36x4	36x5	36x5
Master T 6	2650	4x51	36x4	36x4	36x4d
Maxwell T 1	1196	4x31x51	36x3	36x34	36x34
Maxwell 25	1	825	4x31x51	36x3	36x34
Maxwell 1	1085	4x31x51	32x3	32x3	32x3
Menominee H 11	2290	4x31x51	36x3	36x5	36x5
Menominee H 12	2715	4x31x51	36x4	36x6*	36x6*
Menominee G 31	3580	4x51	36x5	36x5d	40x6d
Menominee J 5	4540	4x51x51	36x6	40x6d	40x6d
Mordland 17-N 1	2175	4x31x51	36x3	34x4	34x4
Mordland 17-B 11	2930	4x41x51	36x3	36x5	36x5
Mordland 17-G 4	3500	4x41x51	36x4	36x7	40x5d
Mordland 17-G 4	3500	4x41x51	36x5	40x5d	40x5d
Mordland 17-J 1	2225	4x31x51	36x6	40x6d	40x6d
Muskegon 20	2	2025	4x1x51	36x4	36x6
Nash 2018	1	1650	4x31x51	34x3	34x4
Nash 4017	2	3250	4x1x51	36x3	36x5
Nash 2018	2	2175	4x31x51	34x4	34x6
Nelson & LaMoore E 11	1700	4x31x51	36x3	36x5	36x5
Nelson & LaMoore E 2	2250	4x41x51	36x4	36x7	40x5d
Nelson & LaMoore E 3	2950	4x41x51	36x5	38x5d	38x5d
Nelson & LaMoore E 5	3750	4x41x51	36x6	40x6d	40x6d
Nute D 2	2800	4x41x51	36x4	36x6	36x6
Nute H 21	3200	4x41x51	36x4	36x7	36x7
Nute B 1	2400	4x31x51	36x5	36x5	36x5
Nute E 2	1800	4x41x51	36x4	36x7	36x7
Noble NW 31	2675	4x41x51	36x4	36x7	36x7
Old Hickory M 1	995	4x31x51	33x4	33x4	33x4
Old Reliable 11	2350	4x45	34x3	36x6	36x6
Old Reliable 21	3250	4x41x51	34x4	36x5d	36x5d
Old Reliable 31	4000	4x41x51	34x5	36x5d	36x5d
Old Reliable 4	5000	4x41x51	36x6	36x6d	36x6d
Old Reliable 5	5000	4x41x51	36x6	36x6d	36x6d
Old Reliable 7	6000	4x51x51	36x6	40x7d	40x7d
Oneida A 1	2200	4x31x51	36x3	36x5	36x5
Oneida B 11	2600	4x31x51	36x3	36x5	36x5
Oneida C 2	3000	4x41x51	36x4	36x5d*	36x5d*
Oneida D 31	3700	4x41x51	36x5	38x5d	38x5d
Oneida E 5	4750	4x51x51	38x6	40x12	40x12
Overland Panel 1	975	4x31x51	31x4	31x4	31x4
Overland Express 1	1015	4x41x51	33x4	33x4	33x4
Packard 1-E 11	2650	4x45	34x3	34x6	

## MERCHANDISING SPECIFICATIONS

THE tables which appear on these pages have been prepared with the thought of assisting the salesman in the merchandising of passenger cars and commercial vehicles. The data have been limited to those facts which the average salesman finds necessary for comparative purposes and as sales ammunition.

The tables will be corrected and revised down to date every week.

They will be supplemented by others from week to week, intended solely for the garageman and repairman who has the maintenance of passenger cars and commercial vehicles as his work.



**North East, "Warts" Westinghouse, "W. I.**

"A. K." Alviner Kni, "A-Lite" Auto-Lite, "Conn" Connecticut, "G & D" Gray & Davis, "Esmas" Esman, "L-N" Lees-Norilla, "N. E." North East, "W. Lard" Ward Leonard, "88" Straight  
 "QD" Quilt Deneable, "C" Clineber, "QDE" Quilt Deneable Reversible, NOTE—8848r means that the rear tires are 8848r and the front are smaller.

Quora for 706



















































# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 7

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, NOVEMBER 13, 1918

Fifteen cents a copy  
Two dollars a year



## Uniform Mileage and Long Tire Life

**M**ILLER Uniform Tires are doing a big share toward patriotic conservation these days when every tire is required to keep going as long as it possibly can bear its burden.

Because Miller Tires give high mileage and uniform mileage.

Because Miller Tires, "geared-to-the-road," make every atom of motor power useful through their road-clinching tread.

Long tire life is a wartime essential, and most motorists know it. What with the need of husbanding every resource and the limit on tire output, they recognize that ninety-nine out of every hundred Miller Uniform Tires, cord or fabric, give the length of life and the uniformity that means tire satisfaction. They are learning uniformity of mileage at a high point of durability is the result of the Miller idea of building tires alike.

*"The Nation expects every Tire to do its utmost"*



Dealers who want to profit by the strong demand for Miller Tires should hasten their orders while there still remains a chance for deliveries. Dealers

in unallotted territory should write at once for the Miller plan.



to tire. They make a live line for an off-season.

Miller Accessories and Repair Kits are in demand more than ever now when every possible ounce of power and every possible inch of distance is required from car

## THE MILLER RUBBER COMPANY

Dept. A-64

Akron, Ohio

Makers of Red and Gray Inner Tubes:  
The Team-mates of Uniform Tires.

3701



UTILITY PUMPS  
for All Cars \$12.00.  
For Fords \$7.50



UTILITY HEATERS  
for All Cars \$9.00 to \$25.00

## What Heater?

Car heaters are here to stay. No one will deny that. They are fast modernizing every car. The only question is what heater to sell—what heater to install.

Dealers and car users who know most about heaters favor the UTILITY. There are many reasons.

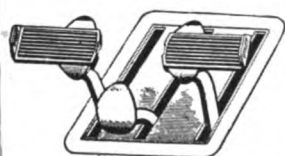
UTILITY Heaters cost nothing to operate—have no upkeep expense—heat, but cannot burn—can be regulated to any degree of temperature—collect no dirt—are installed without ruining the floor board—furnish a neat ornamental foot-rail—cost little for great comfort.

There is a UTILITY Heater for every car, ranging in price from \$9.00 to 25.00. Handled by good dealers everywhere. Send for booklet.

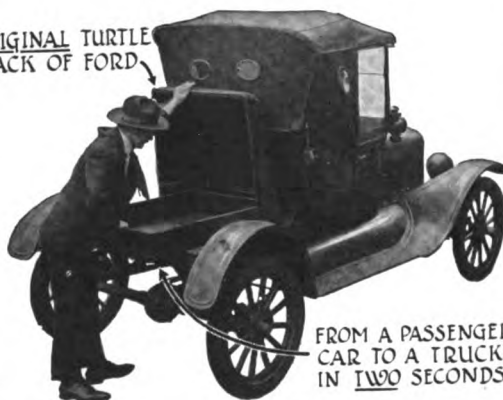
Dealers: Order of your jobber.



UTILITY PEDALS  
For Fords \$1.25



ORIGINAL TURTLE  
BACK OF FORD



FROM A PASSENGER  
CAR TO A TRUCK  
IN TWO SECONDS



UTILITY RIM  
WRENCH  
for All Cars \$1.75



UTILITY UNIVERSAL  
WRENCH  
Set for All Cars \$3.50



# UTILITY

## Automotive Products





# Advance

Automobile Accessories Corporation

# Announces

# Another

# Big Money

# Maker

## "Next Best to Cork Insert"

Here is important news to every jobber, dealer and Ford owner. A far better transmission fabric for use in Ford cars has been produced. After months of research and experiment the Advance chemists have made a great discovery. They have developed a chemical treatment which makes transmission fabric resist the scalding hot oil. **IT STAYS SOFT AND KEEPS ITS BRAKING EFFICIENCY.** They also have perfected the method of applying the new treatment so that it penetrates every tightly-woven fibre.

# White Stripe

**TRANSMISSION  
LINING  
for  
FORD CARS**

## Means More Money to the Trade on Ford Lining Sales

It will change more of your business on Ford lining from the no-name kind to the trade-marked kind. It will mean more money to you and better value and satisfaction to the consuming trade. Being sold both in boxes and from the roll, it answers every need of dealer and consumer.

Jobbers will want to catalog White Stripe Lining. Attractive electros have been prepared and are awaiting your request.

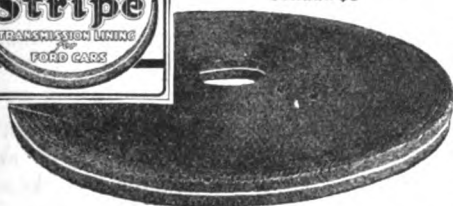
White Stripe is bound to prove another big money maker for the trade. First—because it is the best transmission fabric for use in the Ford car ever produced. Second—because every foot of the lining is marked by the distinctive white stripe for ready identification.



**In Boxes**

**\$2 per set of 3**

Rockies west, \$2.25  
Canada \$3



**In Rolls** 32 cents per foot

Rockies West, 35c Canada, 40c

## Send Coupon for Set of White Stripe Lining

White Stripe fills a real need. It supplies the trade with another popular and fast selling accessory. It supplies the Ford owner with lining for the car that will stay soft and hold its good working qualities longer than any other plain fabric.

■ ■ **ADVANCE AUTOMOBILE ACCESSORIES CORP.** ■ ■  
Dept. L13-1, 56 East Randolph St., Chicago

### For Ford Owners

Enclosed is \$..... for set of three White Stripe Transmission Linings for Fords.

Name.....

Address .....

City.....State.....

### For Dealers

Send sample set of Advance White Stripe Transmission Lining through following jobber.

Name.....

Address .....

City.....State.....

When writing advertisers please mention Motor World—it identifies you



# FISK TIRES

*for passenger cars, small commercial cars  
and heavy trucks*

**T**HERE are good reasons why every dealer should learn all about Fisk tires and the Fisk way of doing business.

THROUGHOUT THE UNITED STATES and in foreign countries the Fisk trademark is established. It stands in the minds of dealers and tire users for quality, for endurance and for fair dealing.

THE LINE OF FISK TIRES is complete. It includes fabric and cord pneumatics, plain and Non-Skid treads, in all standard sizes, for passenger and small commercial cars, with solid tires and big pneumatics in sizes and styles required by all heavy trucks.

THE FISK RUBBER COMPANY works in co-operation with its dealers. It cultivates and maintains a close relation with and a personal interest in dealers in small towns and succeeds in bringing to them the complete service which is available in the bigger cities.

THE FISK POLICY and the Fisk Line aid a man to maintain his present business at a maximum volume and they also enable him to develop in new directions.

It is especially advisable that dealers make their 1919 connections early. It will be to your advantage to get full information about Fisk tires and the Fisk Selling Policy.

**THE FISK RUBBER COMPANY**  
OF N. Y.

*General Offices*

Chicopee Falls, Mass.

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

The Class Journal Co.

11 F. C. Building, 231-241 West 39th Street, New York City  
 Horace M. Swetland, President  
 W. H. Maiph, Vice-President E. M. Corey, Treasurer  
 A. B. Swetland, General Manager

Business Department  
 Charles B. Shanks, Manager

Editorial Department  
 David Seecroft, Directing Editor  
 Ray W. Sherman, Editor  
 Stanley P. McMinn, Managing Editor  
 J. Howard Pile

Branch Offices  
 Chicago—Mallory Bldg., 59 East Madison St., Phone Randolph 0900  
 Detroit—95 Fort Street, West, Phone Main 1351  
 Cleveland—Guardian Bldg., Phone Main 1143

Subscription, Per Annum (Postage Paid).....\$2.00  
 Foreign and Canadian Subscriptions..... 4.00  
 Single Copies (Postage Paid).....10 Cents

## Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to Motor World.

Cable Address, "MOTORWORLD," New York  
 Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 243 West 39th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. C. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
 Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

Back to Business .....	8
N. A. D. A. Wants Members.....	10
Ban on Shows Lifted .....	11
Reilly Story .....	13
Keep Down Tractor Selling Costs.....	15
Winter Business .....	16
Paige 2-Ton Truck .....	18
United War Work Appeal .....	19
Legal .....	20
The Heart of a Fighter .....	21
Better Mechanics .....	22
Shortcuts .....	26
Editorial .....	28
Letters from Readers .....	29
Retail News .....	31
Automotive Equipment .....	32
N. A. D. A. News .....	38
Regular News Department .....	33-41
Specifications	
Cars .....	42
Trucks .....	43-44

Advertisers' Index on Pages 110-111

## Reasons for

**CORBIN-BROWN SPEEDOMETER**

## Supremacy



### 4. Convenience

Corbin-Brown convenience is at once apparent. The dial is large enough to permit of clear, easily-read numerals. The indicating hand is pivoted in the center, thus allowing nearly three-fourths of the circumference for calibration, which adds to ease of reading. The trip odometer is below the indicating hand, and its reading is at no time interfered with while the car is in motion.

The Model AA Corbin-Brown, for automobiles, has a trip odometer which can be reset to any tenth of a mile. The season odometer is 100,000 miles, with automatic reset to zero when the limit is reached.

Model A, for automobiles, and Model B, for motor trucks, can be furnished with odometer having an instantaneous reset. This type of odometer is featured by a new device which permits of resetting to zero, no matter how fast the car may be moving, without danger of sticking or otherwise causing trouble, as is often the case with an instantaneous reset on an ordinary odometer.

A special convenience feature is the Maximum Speed Hand, fitted as an extra. It registers the highest speed and stays at that point until reset to zero, which can be done instantly at any time. Does away with bother and risk of watching the speedometer while traveling at a fast pace, as the record of highest speed stands as long as wanted.

Write for catalog describing and illustrating the full Corbin-Brown line.

## Corbin Screw Corporation

American Hardware Corporation, Successor

New Britain, Conn.

Branches: New York Chicago Philadelphia

# A timely money-maker

The Turner will fill the void in your auto sales caused by the scarcity of new cars.

The Turner is in great demand everywhere not merely because it is a tractor—a machine that the Government is urging farmers to buy, but because it is an A 1 selling proposition as a tractor.

The Turner combines the principles of construction perfected by a quarter of a century's automobile manufacturing experience, with the farm power capabilities that Turner's 18 years' farm engine experience has shown to be right.

Study its specifications—you will recognize a solid, sensible, all-quality tractor, with parts that you know to be the highest quality.

Study its record of *farm service* and you will find a tractor that has made good on all jobs of all size farms of every kind.

Study its sales power—you will find it the kind of tractor that has the greatest appeal to the greatest number of farmers in any section.

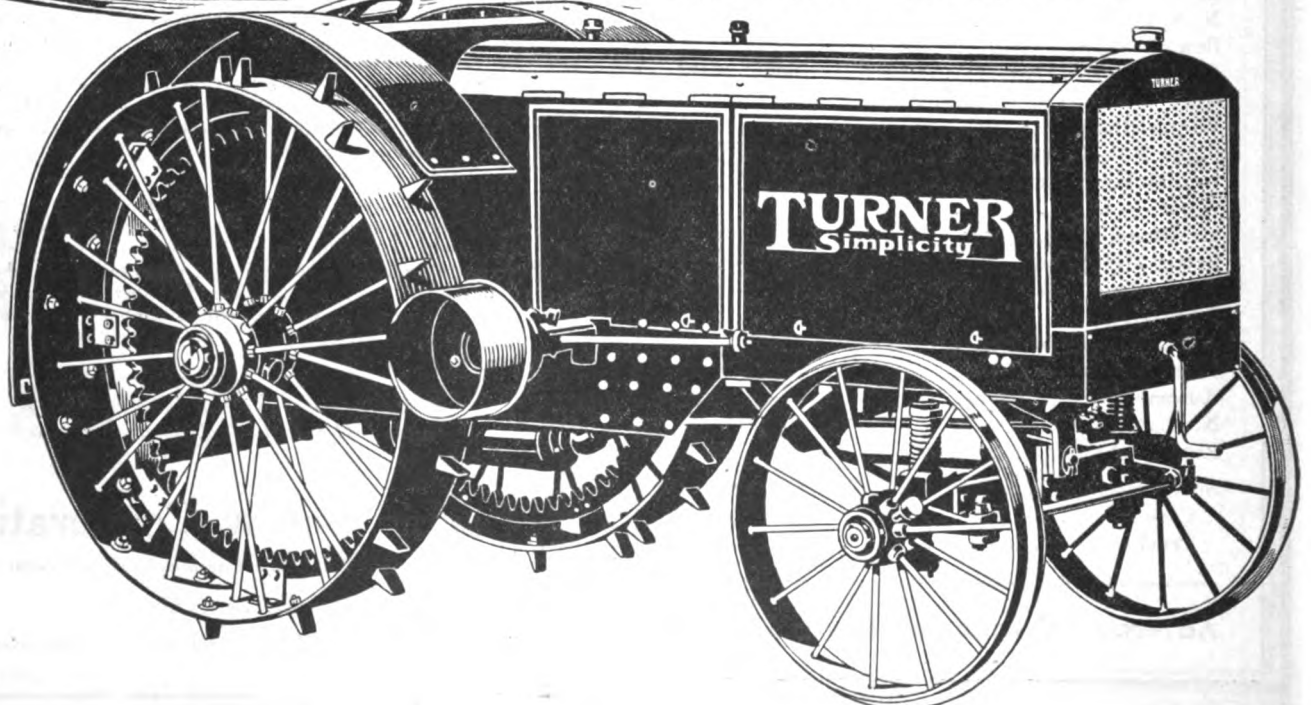
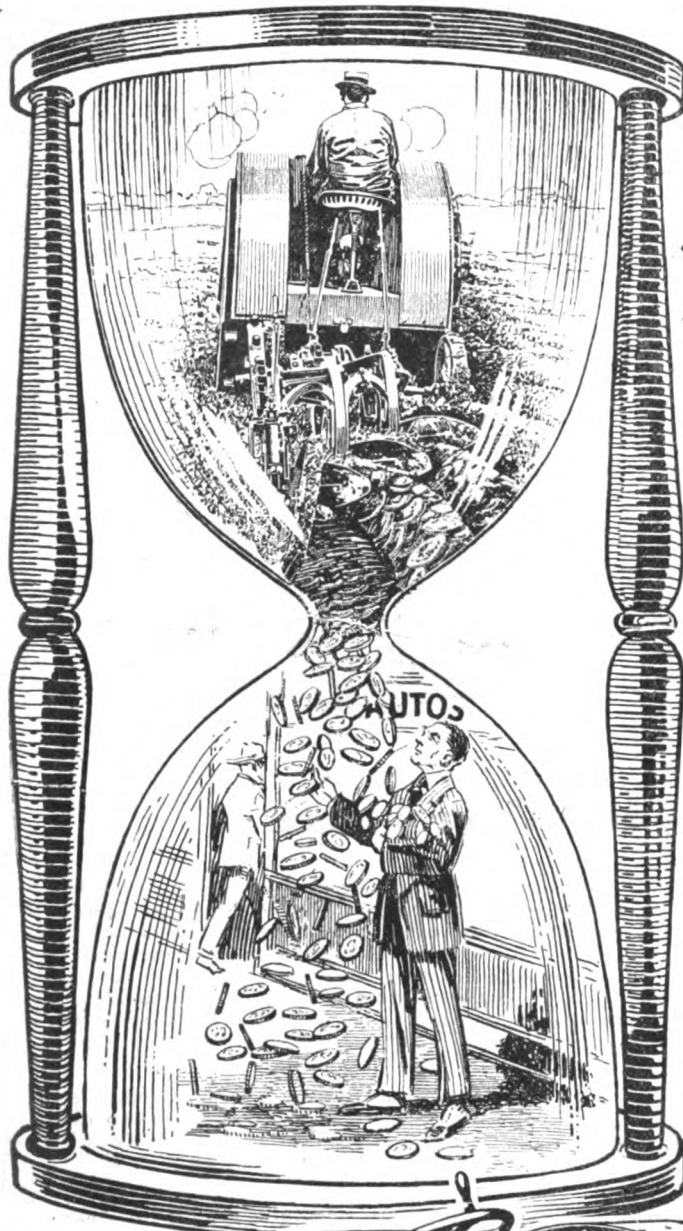
**Two sizes—12-20 and 14-25**

Send for detailed specifications and full information and get our dealer's proposition for your territory before it is assigned. Write or wire.

**Turner Mfg. Co., 225 Port Washington, Wis.**

**Distributors:**

Mound City Buggy & Auto Co., St. Louis, Mo. White Motor & Tractor Co., Sioux City, Iowa. Reilly-Herz Auto Co., Minneapolis, Minn. Sears Automobile Co., Des Moines, Iowa. Mid-West Truck & Tractor Co., Omaha, Nebr. Jackson Motor Co., Kansas City, Mo. Blair Motor Car Co., Baltimore, Md. Owen Magneto Corporation, Chicago, Ill. Turner Tractor Sales Co., Winnipeg, Man., Canada. Maxwells, Ltd., St. Marys, Ont., Canada. Eug. Julien & Co., Quebec, Quebec, Canada.



When writing advertisers please mention Motor World—it identifies you



# The Story of a Soldier Who Will Come Back

¶ When they called him for service in the National Army he was but an ordinary garage owner—or rather, he was a garage owner of the ordinary type.

¶ He had a small machine tool equipment and was otherwise fitted to perform the garden variety of service work. He had the agency for a low and a medium priced car and a truck. He was even considering the agency for a farm tractor. His salesroom was not overly clean. The repair-shop was none too well manicured. The several mechanics and handy-men on the pay roll lolled around good naturedly and—well, it was just one of those outfits of the kind that we were all so well acquainted with. Then the Draft Board gave him the high sign—and it was khaki for his.

¶ The training camp was administered by officers who taught him that orders were to be obeyed. He learned that one could not become and continue physically and mentally fit unless he ate properly, slept regularly, and became systematic in his entire conduct. He learned that there was no such thing as "it can't be done."

¶ At first he didn't seem to appreciate the seriousness of the situation, and often asked himself: "What's the use?" But the camp discipline kept him at it, and in time the system of the military machine became a habit. Then alertness and being up-on-the-bit was not only easy, but grew to be a real pleasure—a pleasure that comes from a task that has been well planned and understandingly performed.

¶ When he went aboard the transport with the rest of his outfit and in due course landed at the receiving camp in England he was a part—and an efficient part—of a vast machine that was being financed by all of us over here who had subscribed to the several Liberty Loans. He knew the people back home were paying his way into and thru the big war and he had by this time resolved that in so far as he was concerned their investment was not to be in vain.

¶ In the Motor Transport corps his work was vital. As a non-com. he was given important duty. When sent across the channel and up to the lines of

*(Continued on page 76)*





# Conservation *vs.* Reconstruction

The reconstruction period is at hand. Now, more than ever, is the time to conserve steel and decrease your costs. The demands of our government are tremendous, we all know, therefore do not interfere with government requirements.

We suggest the exchange of your worn bearings for new Ahlberg Remade Bearings, which are guaranteed to you equal, if not superior, to when new. This at considerable saving.

## Ahlberg Bearing Company

2636 Michigan Avenue

Chicago, Ill.

New York  
Detroit  
Minneapolis  
San Francisco

Branches:  
Cleveland  
Philadelphia  
Los Angeles

Portland, Ore.  
St. Louis  
Atlanta  
Boston

Authorized remakers  
under  
Conrad Patents

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, November 13, 1918

No. 7

## BACK TO BUSINESS



# NOW— BACK TO AND— ON WITH

**F**OR 19 months and one week we have been away from business. We were called away to do a big job.

We did it.

Now let's get back to business.

Dealers should not sit too long and wait to see what's going to happen. If they do they will find themselves in the after-it's-over class, while the live ones will have the world by the tail with a down-hill pull.

The time to start back to business is NOW—not next week.

Some dealers have cars on hand. If the stock is normal don't be so crazy to sell it that you cut prices. From now on **GET THE LIST**.

Some dealers have worried lest the price of steel at once tumble and the market be flooded with a lot of cars at prices lower than those now on hand. This is **NOT** going to happen. Keep your head.

Steel prices are not likely to change greatly right away. It is expected by competent people that steel will be rationed for some time yet.

Even if there seems a chance to reduce the price the steel people will probably wait 90 days before making a change.

Then it will be 90 days more before the manufacturer could get much benefit from that lowered price. And it would be at least 90 days more before this new steel could get to dealers in the shape of completed cars. That means that prices should stand about where they are until about September 1, 1919, at least.

As to production, Alfred Reeves, manager of the National Automobile Chamber of Commerce, says it will be about September 1 before the factories can get back to 100 per cent.

From which it looks as though the cars on hand will be easily salable in the spring, if they are not salable this winter. But, whatever you do, **GET THE LIST**.

**NEVER AGAIN AS LONG AS YOU LIVE CUT THE PRICE ON YOUR GOODS.**

You have had some sound business methods injected into your business through necessity. You have put your service and repairs on a cash basis.

**STAY ON THIS CASH BASIS.**

You have been compelled to make service pay. You have found that it can be done despite the fact that the trade didn't believe it before.

**CONTINUE TO MAKE THE SHOP PAY.**

You have been shown how to cut out a lot of the free service that used to be the ruination of business—it has caused hundreds of failures. Keep it up.

**KEEP FREE SERVICE AT A MINIMUM.**

You have found that used cars can be bought at a price—if you have backbone—and sold at a profit. You have learned that it is business foolishness to trade a car in at too high a price and sell it at too low a price just to make a sale.

**STAY SENSIBLE IN HANDLING USED CARS.**

Some of you have found that new methods have proven valuable in your shop, office and selling organizations. Keep these methods. Get more of them.

**BE A REAL BUSINESS MAN.**

# BUSINESS— THE SHOWS

Many have been automotive dealers. They have taken on trucks, tractors, farm light plants and other allied lines. Some considered these only as temporary expedients to get them through a period in which there were few passenger cars. And some have intended to drop these extra lines as soon as conditions permitted.

**DON'T FORGET THIS:** The dealer of the future is going to handle more than cars. And why not? If a slightly increased overhead can double the volume it means a bigger and more profitable business. Hang onto these truck and tractor agencies. Don't let them go.

## **EXPAND YOUR BUSINESS.**

Perhaps you believe you can't attend to the selling of more than one thing. We agree with you, if your business is of any great size. And, if it is of such size that you can't watch the sale of trucks, tractors, cars, farm light and all the rest, get managers for different lines and build several businesses inside your old organization.

## **DEPARTMENTIZE YOUR BUSINESS.**

Dealers and garagemen have found that accessories are a fine department. They have learned that accessories, if displayed in the service station and salesroom, where they are always seen by car owners, can be sold in great quantities. This department should be studied, continued and developed until it is the big profit-payer it should have been years ago.

## **CONTINUE TO SELL GREAT QUANTITIES OF ACCESSORIES.**

Motor World will shortly point out how dealers may get behind the good roads movement and help build highways to the benefit of the country and themselves.

## **SUPPORT GOOD ROADS.**

There is going to be keen competition. We shall have good merchandisers, men who study business and selling and who make less effort and sell more goods, thereby making more money than the man who merely hands out goods when people ask for them and doesn't figure costs and profits.

## **YOU MUST BE A MERCHANDISER.**

## **YOU MUST BE A REAL BUSINESS MAN.**

## **YOU MUST STUDY BUSINESS.**

If you don't do these things you are going to be left at the post. From this day forward a new era is with us. The old stuff won't go any more.

Along with the other discards go "pleasure" car and the like. Don't be one of those who can't learn the new things and the new terms.

Right now the big need is for a stimulant to give business a big shove back into activity. We need something to "give 'er the gas," to start things hopping.

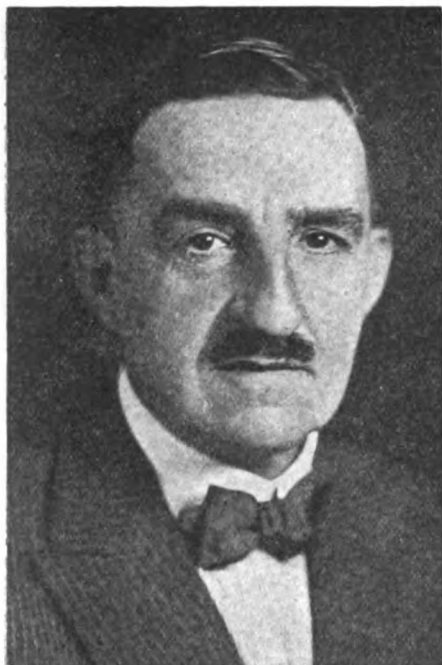
## **WE NEED SHOWS.**

The public has been repressed for a long time. People have been taught to save rather than to spend. This is going to slow up the buying by some people who have no real excuse for holding back. The need for passenger car transportation is greater than ever **RIGHT NOW.**

## **WE NEED SHOWS.**

Furthermore, the motor car industry has been almost wiped out. Many people believe it has been scraped off the map entirely. There is a tremendous public impression to be revised. Folks don't believe we're here.

(CONTINUED ON FOLLOWING PAGE)



F. W. A. VESPER

President of the National Automobile Dealers' Association

# These 2 Men

## Say This to You:

*Give Us YOUR  
Membership*



E. E. PEAKE

Executive Secretary of the National Automobile Dealers' Association

# Let's Finish the Job Right!

The N. A. D. A. set out to get 5000 members. We have 4000 now. Let's have it over with so we can begin the big work we have in mind. The N. A. D. A. has already done a lot for every dealer—for YOU. It will continue to work for you no matter whether you support it or not, so *don't you think it's only a fair shake if you give it your support?* Send your

business letterhead and \$15 to the N. A. D. A. at 909 Gloyd Building, Kansas City, Mo. You'll need the N. A. D. A. during reconstruction more than you ever needed it in war. We have a general manager all ready to start the big work as soon as we get this membership campaign off the boards. Motor dealers are always strong finishers. Let's have YOURS now.

(Continued from the preceding page)

### WE NEED SHOWS.

Dealers in the smaller towns can arrange shows on short notice. Dealers in the bigger cities, where buildings are larger and shows more expensive, need more time. By February and March every one should be able to get ready and that would be the best time to give things a push, right at the opening of the spring season.

### LET'S HAVE SHOWS.

Begin now to get action in all departments of your business. Get salesmen—even if you have to train them—for your spring push. Get mechanics—even if you have to train them. It is safe now to take young men and train them.

You must get action. You must display wisdom. You must be level-headed.

Hang on to the good habits you have acquired—and get more of them.

Be a business man and a merchandiser.

Your real competitors from now on will be men whom you will have to meet with real methods. The old stuff has gone. A new era has come.

From this day forward men will succeed on a new basis—or will fail.

The greatest opportunity that we have ever had lies before us—but it demands a new class of men.

The world has been purged of its dross.

The price has been great—and great is the benefit in a thousand ways.

But to-day it is all memory. Ours is to look forward—not backward.

Set your face forward, with a new light, with new thoughts, new methods and new determination.

THE DAY has arrived.

There is always a place in the sun for him who merits it.



# BAN ON SHOWS LIFTED

---

*Peake Gets Assurance from War Industries Board—Pittsburgh Show Next Week—New York and Chicago May Go Ahead*

---

AS soon as the armistice was signed President E. E. Peake of the National Association of Automobile Show Managers telephoned from Kansas City to the War Industries Board at Washington and received assurance that the ban on shows had been lifted and that the dealer shows could go on.

A meeting of the National Association of Automobile Show Managers is being called for late in November, at the Hollenden Hotel, Cleveland, at which time the managers of all the principal dealer shows will make plans for giving the industry a big early spring boost.

Pittsburgh has for weeks had a show scheduled for

Nov. 16-23 in Motor Square Garden and now proposes to go through with it in a big way.

Manager Samuel A. Miles of the New York and Chicago shows states that the members of the National Automobile Chamber of Commerce must be asked for a vote by mail as to whether to hold shows and that in case the vote is favorable—as it was prior to the time the show ban was imposed—the New York show would possibly be held in Madison Square Garden and the Chicago show in the Coliseum. The disruption of old schedules might make it necessary that the New York show be held later than usual—possibly after Chicago.

Back to Business—Let's Start Right

## Washington Lifting Lid on Production

**Car, Truck, Tractor and Tire Restrictions Cut in Half—Cars Up to 75 Per Cent for Rest of 1918—Further Removal of Curtailments Expected by January 1**

WASHINGTON, Nov. 11—The War Industries Board to-day began removing its restrictions on manufacturing of automotive products.

Car makers, during the rest of this year, can make 75 per cent of what they made in the same period a year ago, instead of 50 per cent.

Truck makers can produce 100 per cent of what they made in the same period last year.

Tractor makers who made 50 or more in the year ending Sept. 30 can finish this year by making 87½ per cent of what they made in the same period a year ago.

Those who made less than 50 tractors can make 9 in the next 7 weeks.

Those who made less than 10 can make 4 during the rest of 1918.

Tire production, which was cut to 50 per cent, can go ahead at 75 per cent of the output during the same weeks of 1917.

The same ruling which now allows truck makers to sell to essential and non-essential users permits the steel people to sell to the automotive industry without restriction. The lid is going up more rapidly than some folks anticipated, and this first lift, made to-day, is the first move.

The motor-car industry has been advised to get on 100 per cent war work by Jan. 1, and the industry had been operating recently at less than 50 per cent, all of which is now past history.

WITH THE BEGINNING OF THE NEW YEAR IT IS EXPECTED THAT

ALL RESTRICTIONS WILL BE REMOVED AND NORMAL PEACE TIME INDUSTRY ACTIVITIES WILL BE RESUMED COMPLETELY.

The War Board has also removed all restrictions as regards the construction of Federal, State or municipal highways, roads, bridges, etc., and for the development of mines, including oil and gas wells. The order decreasing the amount of curtailment also applies to all agricultural implements, road making machinery, oil and gas consuming devices and all other commodities which have been restricted in output.

Non-war building construction is now allowed to a certain extent and any structures or additions or repairs not costing over \$10,000 can be made without permits, while those not costing over \$25,000 can be made if a permit is secured from the State Council of Defense.

Any building begun prior to Sept. 3, 1918, and which was substantially developed can be completed without permit.

**ALL RULES, REGULATIONS AND CONSERVATION MEASURES DEVISED BY THE CONSERVATION DIVISION OF THE WAR INDUSTRIES BOARD WILL BE CONTINUED IN FULL.** This means that the plans for reducing the number of sizes of pneumatic tires, truck tires and farm plows and the elimination of the uses of certain materials in motorcycles will continue.

The Priorities Division also announced that it will assist all industries in so far as it is possible by means of priorities to secure the materials that will make for normal business, but priorities will be particularly given for the supply of the army and for the production of food, gas, oil, clothing, minerals and for aiding public utilities.

Thus the first question of the industrial world as to the resumption of normal industry has been answered promptly by the War Industries Board. The Fuel Administration up to this time has announced no relaxation from the restrictions it imposed on non-war industries, and, in fact, has stated that no immediate reduction of the Government program for production or conservation of coal or oil during the winter will follow the signing of the armistice terms. Cessation of hostilities will unquestionably relieve the demand for bituminous coal, however, and some relaxation of the present regulations is anticipated despite the announcement.

The other important question of manufacturers as to what the Government will do regarding war contracts is one that cannot be definitely answered at this time. The armistice found the War Department totally unprepared for peace and cablegrams are passing between here and the American Expeditionary Forces constantly this week to determine which war activities must be continued for the present, what can be gradually curtailed and what can cease at once. Conferences are also being held and it is expected that definite news on this subject will be made public shortly. Ninety per cent of the war contracts contained cancellation and termination clauses allowing for "termination in the public interest" by which payments will be made by the Government in the event of termination of the contracts for articles completely manufactured at the time and for raw materials, articles in process of manufacture and the contractor's outstanding obligations incurred in good faith in connection with the performance of the contract.

Provision is also made for payment by the Government on account of depreciation of plants and equipment. In return the Government is released from the obligation to take the remaining articles, not manufactured, specified in the contract and to pay anticipated profits to the contractor on the unfinished portions of the contract.

It is expected that all of these contracts which should be terminated in the public interest will be ended and that the manufacturers will be satisfied with the decisions of the Board of Contract Ad-

justment which settles the amounts due the contractors. In those contracts without cancellation or termination clauses, and which the Government may desire to turn back, it is expected that the contractors will also be satisfied with a settlement made on the basis of the provisions contained in those contracts which have termination clauses as stated above.

For a precedent in this matter the Government has the practice which followed the Civil War. At that time the contracts had no cancellation clauses but all were cancelled and contractors were forced to the Court of Claims, at which they met with little success. They have this same option to-day if they are dissatisfied with the findings of the Board of Contract Adjustment or the Secretary of War, to whom those findings can be appealed.

The delay in curtailment of war activities is caused by the ignorance of the authorities in this country of the desires of General Pershing. The Motor Vehicle Section of the Quartermaster Department anticipates, however, that it will completely cancel the last order for 25,000 B trucks which was placed recently and will take all of the previous order for 8000 of these trucks which is now about 50 per cent completed.

It is expected that the orders for the A and the AA trucks which were recently started on by the manufacturers will be reduced from 40 per cent to 60 per cent depending on the needs of the Motor Transport Corps of the A. E. F. The contracts placed with the Packard company for 4000 military tractors will be recalled. Similarly, the Ordnance Department, engaged in tractor production, and the Bureau of Aircraft Production, which controls the output of airplanes, are taking steps to reduce production, but neither of these departments has yet reached a definite decision.

The War Industries Board and the Fuel Administration are both temporary departments created for the duration of the war and they retain authority until peace is formally proclaimed. At present a committee appointed by President Wilson is investigating conditions to ascertain whether these departments should be continued by congressional legislation following the declaration of peace, or whether they should be merged with the respective established Government bureaus, the Fuel Administration for example merging with the Department of the Interior, or if a reconstruction committee should be formed to take over the work of these departments or if possibly the Council of National Defense, which is a permanent department, can assume the more important functions which they give up with the relinquishment of their authority.

The War Trade Board, which is also a temporary department and which may delegate its work to the Department of Commerce, announces that for the present the control exercised over imports and exports will continue indefinitely to assure shipping space for the constant flow of supplies for the American and Allied forces which will be required for many months to come and to prevent the

flooding of the United States with foreign orders which would strip this country of its immediate available commodities and which would come with any lifting of the present embargoes.

In view of the permanency of the Council of National Defense, which department was created prior to the war, and which by the bill creating it can continue after the war, it is expected that the Highways Transport Committee, which is a part of the Council, will be continued and will operate on a broader scope than heretofore, working particularly with the Food Administration and the U. S. Shipping Board, developing roads to facilitate food production and distribution and its delivery to the ships for overseas consumption.

The Motor Transport Corps, also recently organized in the Army, is expected to continue with increasing importance for the time being as the overseas forces will operate their motor vehicles widely as heretofore and the M. T. C. controlling operations and maintenance will continue this work. The Motor Vehicle Section of the Quartermaster Department, purchasing motor vehicles, will likely discontinue or be reduced as soon as the production and procurement of the remaining vehicles necessary for the Army is completed.

Plans for control of labor following demobilization include a scheme for "demobilization for peace as we mobilized for war." This means that the men to be first released from the army will be those who are the heads of families or who are skilled workers necessary to peace time industries. It is also planned to use the Department of Labor Community Boards to bring employers and workers in contact.

"It is clear that there is work enough," said Secretary of War Baker to-day, "in the United States for all the labor in the country. Many Government activities like the ship building industry will continue uninterruptedly and others will gradually be readjusted." It was further stated that there should be no fear of keen competition and surplus of labor caused by the demobilization because these men will be distributed to their own localities and can thus be quickly assimilated by local industries.

Manufacturers who have been in Washington in the past few days state that they are trying to retain as much of their war work as possible until they can gradually change their equipment from a war to a peace basis and thus by continuing operations hold their labor organizations together and be ready for large peace production when all conditions allow it.

The work of reclaiming the vast amounts of materials and supplies in plants will be carried out by the War Department in co-operation with the War Industries Board. A considerable part of the material, including particularly motor vehicles, will be disposed of abroad, while those remaining will be brought back to the United States. The Belgian Government is negotiating now for the purchase of American Army trucks and automobiles in France.

# THE CHANCE OF A CENTURY

For Every Dealer, Every Salesman,  
Every Office Boy, Every Mechanic,  
Every Human Being in Business.

It Is Here To-Day

By Ray W. Sherman

**H**ENRY BENNETT, who sold the Redman in and about Callawassa, was having hard sledding—but was managing to get by.

He had been on the verge of elimination not so many months ago, but a spirited session with his old baseball-in-the-sand-lot-days friend Reilly, distributor of the Sennett, had helped Henry stave off what looked like sure defeat in the fight of business. It gave Henry a new viewpoint—and from then on his income and out-go were more nearly within reasonable relations.

"Well, Reilly, it's going a lot better," Henry smiled and at the same time walked in and sat down in the chair beside Reilly's desk.

"That's fine! Glad to hear it!"

Henry explained how he had made his service pay and had begun moving some of his new automotive lines, and they talked—and talked—and talked—like a couple of women who haven't seen each other since yesterday.

"You ought to come through in good shape, Henry," said Reilly finally. "You've got on a right basis. Your business looks pretty sound to me now, but it sure was in bad shape a few months ago."

"Sure was!" said Henry, with his old cheery laugh. "And if—"

## Biggest Opportunity in Generations

"You know, Henry," Reilly interrupted, "you—and I—and everybody else in this business—and in every other business—has to-day the biggest opportunity that has ever been given to him in generations. Do you know that we have the chance of a century—the biggest chance we will ever have in our lives?"

"What?"

"We are on the verge of big success—every one of us—and most of us don't know it," Reilly continued. "We have been struggling along in business with the hope that ten or twenty years from now we might have big success, fame, a lot of money, or something. And we have been kicked bodily into the conditions of ten or twenty years from now—and we don't see it."

"Well," puzzled Henry. "Just what do you mean?"

"Here's the dope," Reilly explained with intense earnestness. "Take my own case. I always looked to the day when I could expand this business. I dreamed of the time when it would have grown to such proportions that I would have a lot of departments, with a lot of salesmen, a lot of dealers, a highly efficient shop, and profits coming in from every source. When I got the thing so well organized, with a capable general manager and able department heads, I was going to look around for other chances for investment.

I planned to make money—and more money—and more money—just for the fun of making it. It's a great game.

"And not until some few months ago did I wake up. I had considered this war period as a set-back, as something to carry along until peace came. It seemed to me it was just an interruption in the plans that were going to let me realize my dream. And then one day like a flash it came to me that instead of this being a set-back it was the big opportunity. I saw it all. I waked up. I began to take advantage of the conditions I had hoped for and now found are here, and—Henry—so help me Hannah, I'm going to make my dream come true in less than five years, instead of twenty."

"But how? What? Tell me!" eagerly exclaimed Henry.

"Here's the idea: I wanted to expand my business. This meant that there must be conditions which would support the expansion. I had dreamed of a body department, and possibly a complete factory, but then I saw that what I should grab was the chance to make a mammoth sales and service organization. I saw that the war was creating the truck business, the tractor business, the flying machine business, the repair business, and all the rest of these things. The war has shown the world what twenty years of peace could not have brought about.

"The education of the public has been forced. The demand for trucks and trac-

tors and other mechanical efficiencies has been created. The use of machines of transportation has been made an absolute necessity. It was my big opportunity for expanding my business. The demand is here—and will be bigger—and all I have to do is get in shape to supply it.

I'm not taking on trucks and tractors as a war measure—I'm taking them on as an after-the-war measure. I'm going to make this old House of Reilly hoot. I'm all ready to begin the big fight for the future.

"Don't you see, Henry," Reilly almost pleaded, "that the war has forced upon us new conditions and that the man who takes advantage of these new conditions is simply grasping an opportunity that is threatening to kick in his doors?"

"The same thing applies to salesmen, to mechanics, to everybody. The price of unskilled labor will drop after the war somewhat. But there will always be a field for skilled men. They were in demand before the war and they will be in demand more than ever after the war. There will be a need for leaders as industry expands. There will be a call for better-than-the-average men and women. These conditions are simply thrust upon us. All we have to do is take advantage of the opportunity.

## Must Study to Improve Himself

"The salesman who is in a stay-at-home classification ought to be studying to-day to make himself better. He is going to be far behind the men who will come out of the army. These ex-fighters have been taught initiative. They have new ideals of life, new conceptions of progress. They will overshadow the little slow-moving man who stays at home and doesn't progress. They'll push him farther back than he ever was before.

"The mechanic ought to be acquiring a maximum of engineering knowledge. He ought to be fitting himself for bigger work. Soldiers have been put through engineering colleges in six weeks. Untrained men have been made skilled mechanics in three weeks. What chance has the home laggard got against men like these?"

"Henry, we all have had our dreams. They have been of what we would do at some time in the future. And there came the Great War and shoved the clock of the years ahead a generation and the conditions of which we dreamed are squarely in front of us.

"Just stop and think where you have dreamed you would be ten or twenty years from now—and start for that place right away, for the pathway is open in front of you. But you've got to start now and go fast or the early awakeners are going to crowd you off."

## BACK TO BUSINESS

*In the entry into peace  
and reconstruction  
what will be your first  
step?*

*What are your plans?*

*Let us tell other deal-  
ers so that they may be  
helped in meeting their  
problems.*

## BACK TO BUSINESS—AND

# Keep Down Tractor Selling Costs

Smith, of Clay Center, Kan., Built a Profitable Automotive Business Because He Got Off on the Right Foot at the Start

*The tractor industry is just in its infancy to a good many dealers, and whether they make a success of the business or not will depend very largely on how they start out to handle it—MURRAY M. SMITH, General Manager, W. W. Smith & Sons, Clay Center, Kansas*

**F**ROM the very first W. W. Smith & Sons, Clay Center, Kan., started out to handle the tractor business on the basis of responsibility.

The thing at stake was the reputation of the firm for making good on all its representations and for reliability in all of its undertakings.

The firm assumed responsibility for all that it sold, hence the goods had to be of such quality and dependability that in no case could they damage the reputation of the firm.

*Strict adherence to this policy has put the firm in a position where now it is unnecessary for it to do some of the things some other tractor dealers, who have not been in the business as long or who may have followed a different policy, think it needful still to do.*

For instance: W. W. Smith & Sons no longer find it necessary to give demonstrations, either public or private. When tractor selling was first undertaken by the firm, and this was very early in the development of the trade, such demonstrations were held. The tractor was something new. Its capabilities were matters of speculation and theory subject to proof. No accumulation of experience existed which might be relied upon to prove the claims that were made. The farmer was doubtful. He had to be shown.

This W. W. Smith & Sons undertook to do. The reputation of the firm was staked upon the reliability of the tractor sold and the firm stood ready to demonstrate and prove the claims it made. These were conservative. No tractor ever was oversold. Enthusiasm never was permitted to run away with careful judgment. The advantages of the tractor were presented in a logical way, and both



MURRAY M. SMITH  
Manager of W. W. Smith & Sons,  
which is cutting tractor selling costs  
in Clay Center, Kansas.

in the selling and in the subsequent service competency in the men employed in these departments was demanded.

The result is that to-day the tractor business of W. W. Smith & Son is one of the largest and most profitable in that section of the country, and present sales are made principally through newspaper advertising, sample room display and personal solicitation. The firm has established its reputation for dependability upon such firm foundations of past satisfaction rendered that expensive demonstrations and excessive service no longer are demanded by tractor buyers.

The members of the firm are consistent believers in newspaper publicity. Ample space is taken in the local papers and the tractor department is kept prominently displayed before the public. The firm takes advantage of the advertising experience and ability of the concerns it represents, and the display advertising carried in the Clay Center papers is based upon copy suggested by the factory advertising departments, with such changes as may be necessary to give it a local flavor. Reproduced herewith is a typical display advertisement of the firm. It occupied a space 6½ x 12 in., and the striking display gave it additional prominence.

### Salesroom Display Effective

In addition, full use is made of the printed matter furnished by the various factories represented. This is mailed out regularly to the prospect list, and a supply always is accessible in the salesroom and office for the convenience of casual callers. No form letters are used. When it is necessary to write to a prospect the letter sent is personal and deals in a specific way with his individual case.


The main building occupied by the company is 46 x 140 ft. A room at the front, 46 x 100, with full width plate glass windows, is utilized as a salesroom. Always, immediately behind this glass, in full view of passers by, stands a tractor equipped with an engine plow. Tractors always are carried in stock, not alone for display purposes but in order always to be available for instant delivery.

### Prospect File Frequently Revised

A prospect file is kept and is subjected to frequent revision. Prospects are secured by direct canvassing, by visits of likely customers to the store, through the knowledge possessed by individual members of the firm regarding the conditions and needs of farmers in the locality and in other less direct ways. As soon as it appears that a farmer is likely to be a prospect, his name is put on a card for the file. This card carries also the type and size of tractor the prospect



*The Smith business is one which caters to the needs of the prosperous farmers of the surrounding country. Smith sells implements, vehicles, tractors and plows and with it all combines the highly profitable Dodge motor car business*




W. W. SMITH & SONS, Inc.  
1001 North 1st St., Clay Center, Kan.  
L. A. REED, Gen. Mgr.  
Clay Center, Kansas

**W. W. SMITH & SONS**

DEALERS IN

**AGRICULTURAL IMPLEMENTS  
VEHICLES AND AUTOMOBILES**

CLAY CENTER, KANS.



has shown interest in, with the date when he will be likely to consider buying.

When this date arrives, if the prospect has not already been in voluntarily to talk tractors, Manager Smith, or some other member of the firm, makes a personal call on the prospect at his own home. The salesman who is responsible for this particular prospect, or who will be relied upon to follow up the sale, nearly always goes along when the call is made. However, circumstances surrounding the case determine the advisability of this.

#### Equipment Is Automotive

W. W. Smith & Sons were in the implement business before they became automotive dealers; hence their equipment has to do primarily with farm implements. When motor cars were taken on a building adapted for garage and service station was added. This is used sparingly, however, for the tractor department.

The theory upon which the firm operates is that tractor troubles are best attended to on the farm. To make this

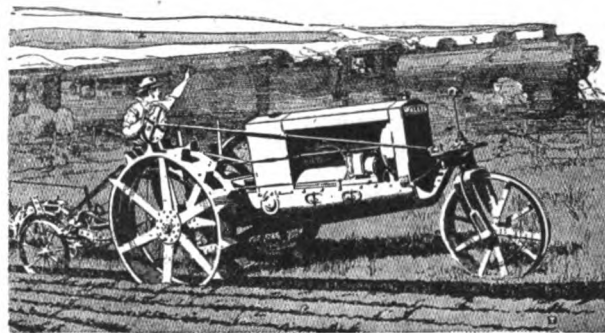
(Continued on page 34)

#### ABOVE

The letterhead of this real automotive dealer says that he sells cars, tractors and implements. It is helping him to that basis where the costs of tractor selling are greatly reduced

#### RIGHT

Newspaper advertising is one of the effective mediums by which the Smith story is put across to the farmers. It is all part of Smith's plan for reducing tractor selling costs



## WALLIS

### The Tractor Years Ahead Of Its Time Is Here!

THIS tractor which experts acknowledge is years ahead of its time, combines for the first time those elements which our farmers want—Light Weight, Durability, Power, Speed, and Economy.

Records of service in United States, England, France, and Mexico prove that in the Wallis the farmer now has a farm power plant which will do his work dependably and at low cost.

Before you select any tractor we advise you to investigate thoroughly this remarkable small tractor.

#### How Power and Light Weight Are Combined

The Wallis proves that power is not a matter of great weight. While delivering the same and even greater power at the draw bar, the 2000 pound Wallis actually weighs from 1000 pounds to 2000 pounds less than other tractors in its class.

This is due to simplified and advanced design which eliminates a tremendous lot of useless weight.

For instance—the frame is made of boiler plate rolled into "U" sections. It eliminates all beams, braces and counter braces and with them a lot of weight. Further, this member serves also a four-fold purpose of—frame, base of crank case, transmission case, and rear axle housing. This frame is the lightest yet strongest construction known to mechanics.

The power usually required to propel heavy weights is, in the Wallis, turned into power and speed.

#### Speed—Necessary to Economy

A tractor should not be judged alone by the number of bottoms it pulls. This is easy to understand. The speed with which it pulls them is most important. You wouldn't haul a load with ease.

Private demonstrations every day. If interested, call at our store and we will be glad to give you one.

We also carry in stock the 10-30 Mogul and the famous 14-38 Ramely Oil Pull which pulls a four bottom plow with ease.

CLAY CENTER, KANSAS.

This advanced type of tractor pulls three 14 inch bottom 8 to 2 inches deep at a rate of 2 1/2 miles per hour or 10 2-6 acres per day. This equals the work of 10 horses.

The average tractor is designed to pull the same load at a rate of 1 1/2 miles per hour or 7 1/2-8 acres per day.

On this basis alone the Wallis will save 50% of your time in plowing.

#### The Right Way to Figure Economy

What you pay for a tractor does not determine tractor economy. Often times the most inexpensive implement is the most costly in the end.

Economy must always be figured on a basis of work done. To determine this divide the purchase price by the number of years of service. By this measure the advance type Wallis will give you the greatest return for your money.

Buying a tractor is a serious problem. What you get for the money you pay will be largely guided by the care with which you weigh the facts above before you buy.

Come in and talk with us on further details of this tractor which is conceded by all to mark the most advanced type of tractor construction.

W. W. SMITH & SONS.

**BACK TO BUSINESS—  
AND START RIGHT**



# Winter Business

Last week we told you about a Wisconsin dealer who had quit.

Wonder how he feels about it now?

*Fight for Winter Business.*

## Use the Ideas on This Page

### Sell Winter Tops

**W**INTER tops for touring cars have proved the largest end of many a motor car dealer's business during the past few weeks in Kansas City territory. Some distributors at Kansas City have placed through dealers large quantities of the tops, practically without any special sales effort.

One distributor who grasped the opportunity early in the season has sold more than 300 between July 1 and Oct. 1. His only method of selling was to send his dealers copies of the advertising of the manufacturer. The motor car dealer seemed to have been waiting for just such an item to sell—for the orders came in steadily.

The distributor had tried to accumulate a stock of the winter tops; but has abandoned that idea. Even tops for roadsters are being grabbed up.

J. Frank Martin, manager of the Buick branch at Kansas City, is enthusiastic over the winter top as a means of keeping a motor car establishment going this winter.

"There seems to be a strong tendency towards the enclosed car," said Martin. And the winter top for touring cars meets this desire. *The average dealer who puts a little effort into selling tops can keep his organization intact, and get by this winter and make money.*

### Corral Repairwork

A summer resort man hired a mechanic who was good on Marmon cars and sent a letter to all Marmon owners. It worked so well he tried the plan with other makes. Get a good mechanic or two and sent this letter to owners of the makes of cars that you think will bring you the most and best business:

#### The Letter

Even though car production will resume in a few months it won't be back in quantity until late next summer.

And you might not be able to get a new car even if you wanted one.

But one thing is certain—and that is this:

As soon as the sun warms the country as the recent news has warmed our hearts you are going to want to get your car out onto the road in a hurry. And you'll want it to run right and look bright and spring-like.

We have in our organization a man who is an expert on your make of car. He can look it over in a short time and tell you whether anything needs to be done to it to get it in tip-top shape. Then we shall leave it to you to decide how much renewing you wish us to do.

We guarantee our work.

If you'll drive the car in any day we can make a report on it in a short time.

It pays to patronize a place that is recommended by its own customers.

Ask any motorist about us.

Then drive in.

### Sell Anti-Freeze

#### SEND THIS LETTER

You're going to do more driving this winter than you thought you were.

For a time it looked as though we might have gasoline restrictions and other handicaps to motoring. But things look rosier now, don't they?

They will continue to look rosier if you make sure your motor doesn't freeze some frosty night when the temperature takes a drop you didn't expect.

The best way to avoid this unpleasant surprise and to avoid the expense of getting the damage repaired is to fill your cooling system with HOTTO, which we can recommend for your motor.

With HOTTO in your cooling system the motor can't freeze.

If you'll drop in at our place we shall be pleased to tell you all about it—and, most important, tell you how to use it.

Last winter some of the users of various compounds had trouble, mostly because the directions were not followed. Let us talk this over with you and tell you why it is we can guarantee HOTTO.

You'll surely need it.

Preparedness pays.

### Print Christmas Cards

Get ready NOW to send out some Christmas cards. It looked at one time as though these cards wouldn't be very good business, but those days are past history now.

Therefore, begin NOW to get the cards ready. Get everything all set, the envelopes addressed, all stamped and all ready so you can put them all in the mails two or three days before Christmas.

Print the message on a card about 2¼ x 4 in. By combining a green card with red ink, etc., you may be able to get good effects. The best work is a good white card with the message in black and a small green Christmas decoration—not a big one.

Here is a suggested message, provided the card bears printing only:

"A Merry Christmas—and the wish that the New Year may see all our hopes fulfilled.

"C. J. Reilly, Inc."

### Teach the Farmer

There are farm implements, tractors, cars and all sorts of things on the farms about you that need repairing. Ordinarily the farmer waits until he needs his implement before he gets it fixed.

There is Winter Business for you in making a campaign among farmers to let you fix their farm machinery this winter when there is plenty of time.

For instance: Write a letter to all the farmers, telling them that a day saved next spring may be worth more than a month this winter. Tell them they will be able to get into summer work better if they take the winter weeks to get their machinery fixed.

Ask them to send you a list of the machinery they have with any needed repairs, and if they have a tractor or gas engine that has some trouble the farmer can't locate, ask for the chance to look at the machine and see what ails it.

If necessary, put one of your men on this special work of driving around among the farmers drumming up repair work.

# There Is Money for Garages and Dealers This Winter in Soliciting Car Cleaning

1—Get your places ready for the work

2—Go out after the business

## HERE'S HOW ONE "LAUNDRY" MAKES MONEY

**T**HE Pioneer Auto Laundry Co., Kansas City, is taking in about \$250 a week, doing nothing but cleaning and greasing cars. Established in July, 1918, it had to get additional space within a few weeks, so quickly did the public respond to the offer of service. As winter approached, and the business proved its field, arrangements were made for meeting winter conditions.

The laundry expects a good business this winter. Its work suggests revenue for every garageman.

The idea sprang up in the mind of a salesman for the Hyatt-Buick Motor Co., who had so often heard owners wish somebody would wash their cars for them while they were downtown. The salesman's father, J. H. Durkee, took it up—and organized a company, J. E. V. Voorhees coming in as secretary and treasurer. Voorhees was a motor car salesman, a young man with a wife who also wanted to be busy.

The new company rented a lot on Motor Row, McGee Street, erected a wooden roof over a third of the lot, put up a galvanized iron building for an office and oil storehouse, laid wooden floors where the washing was to be done—and was ready for business.

Customers bring their cars in the morning, and call for them in the afternoon or evening.

As the business progressed more and more garages and automobile sales companies have taken advantage of the service. A dealer will send here for cleaning and greasing his used cars, the cars on which his mechanics have made repairs or the demonstrating cars. Dealers, repairshop men and garagemen seem to

find it more economical and satisfactory to send their cars to the laundry than have the cleaning done by mechanics whom they need on other work. More and more trucks are also being sent to this laundry, not only delivery trucks but the heavier equipment also. Dealers who patronize the laundry to a large extent are given a trade discount of 10 per cent.

During the summer the washing and greasing were done in the shed, open at the front, with a wooden floor. This structure has been prepared for the winter. A front wall was added, with double swinging doors for each of the three stalls. A concrete floor was laid, draining to the sewer.

Three coal-burning stoves were installed. One of these stoves carries a large tank, filled with water from a hose, and having a faucet through which hot water is let into a barrel. This barrel is always full of soapy hot water for washing cars. Water pipes overhead and at the ends of the stalls have hose connections, the cars being rinsed in the cold water. Racks for oil cans, rags and utensils are provided on the partitions between the stalls.

Glass transoms over the doors provide light for cleaning on bright days. Electricity is being installed, with long cords for globes, so work will not be hampered on dark days this winter, and so men can work late into the evenings.

The work of cleaning and greasing is done chiefly by negroes. These formerly were paid \$18 to \$20 a week. They have recently been put on a "commission" basis, receiving 30 per cent of the total bill on each job. The men like this plan

Pioneer Auto Laundry Co.		
STATION No. 1		
1709-11 McGEE STREET N <sup>o</sup> 673		
Wash	✓	2.00
Polish	✓	.75
Grease Cap	✓	1.00
Grease Universal	✓	1.50
Oil Transmission	✓	.50
Oil Differential	✓	.50
Oil Springs	✓	.50
Get Out Squeaks	✓	1.00
Clean Cushions	✓	1.50
Clean Inside top		
Clean Outside of Motor	✓	1.75
Drain, Clean and Fill Motor	✓	1.00
Fill Motor	✓	.50
Ready		4.30
Name	C. K. Jones	
PIONEER AUTO LAUNDRY CO. N <sup>o</sup> 673		
Station No. 1		
1709-11 McGEE Street		
All cars MUST be called for by 6 P. M.		

An order ticket is attached to the car or truck brought in for work. This ticket or tickler bears blanks for the items and a column in which check marks are made opposite each item to be covered. There are basic prices for each class of work, which are noted on the ticket when the customer desires to know beforehand what the job will cost. The tickler bears the customer's name and the order number. A detachable stub at the bottom bearing the number is given to the customer. When the work is completed, the price of each item is entered, in columns provided, and the total is the cost to the customer. Charges are as shown on the ticket.

better—they earn more, and have greater liberty as to the hours they work. Some of them earn as much as \$5.50 a day, and the average is from \$15 to \$25 a week. The plan appeals to their initiative, and they work willingly long hours, since they are practically on their own jobs on each car they are cleaning.

The system of keeping track of the men's earnings is novel. The company has tickets, bearing various designations of sums, from 5 cents to \$1.05. These

(Continued on page 41)

J. F. V. VOORHEES, Sec. and Treas.

J. H. DURKEE, Mgr.

## WE SPECIALIZE

DEAR SIR:

Your automobile either needs good care by yourself or others. If you desire expert work done, we are your men.

We do nothing but Wash, Polish, Grease, Oil, Hunt for Squeaks, Clean Motor and dress the Leather and Tops.

Leave your car with us when you come down in the morning and it will be ready when you go home.

REMEMBER, these are war times and you should take GOOD CARE of Your Auto.

PIONEER AUTO LAUNDRY CO.,  
1709-11 McGEE Street Kansas City, Mo.

A card bearing this message is sent to car owners and has been productive of business. Being 4 x 6 in., it can be mailed for one cent

## Paige-Detroit Offers 2-Ton Truck

*Is Priced at \$2,950—Models to  
Be Extended When Government  
Contract Is Finished*

THE Paige-Detroit Motor Car Co. is now on the market with its 2-ton truck. This truck has been under development for some time and is an assembled model mounted on a wheelbase of 150 in. The Paige company has been building, during the past few months, a number of trucks for overseas use, these being the result of Government orders. The 2-ton model is the first effort of the concern to market commercially a truck of this capacity and it represents the entrance into the commercial vehicle field of another of the growing list of passenger car concerns which have previously confined their efforts to that field.

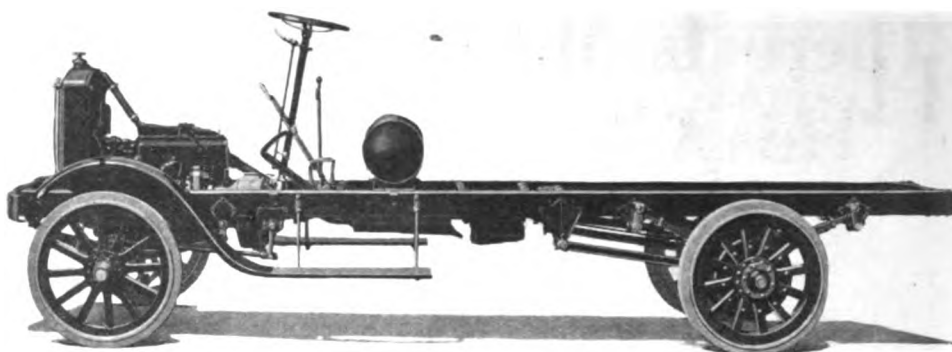
A limited number of the new Paige trucks will be distributed. As soon as the concern can meet its Government obligation it will increase its production on this model and will widen the scope of body design in order to take care of various fields of transportation.

The chassis sells for \$2,950. It is rated at 2 tons capacity. The frame is made up of pressed steel on a semi-flexible design. The truck is mounted on solid tires, 36 x 4 front and 36 x 7 rear. The wheels are wood with square spokes.

The units composing the chassis are the product of well known concerns in the parts field, the engine being a Continental, the bearings Timken, the carbureter a Stromberg, Pierce governor, Bosch ignition, and the remaining list in keeping. The power plant is a unit type, the Continental engine being a four-cylinder,  $4\frac{1}{2}$  by  $5\frac{1}{4}$ , with the cylinders cast together. The valves are on the right side.

Pump water circulation is used for cooling, the pump being centrifugal type, and the radiator a spiral-finned tube. The ignition is set spark and no starting or lighting system is supplied. The carbureter is a Stromberg,  $1\frac{1}{4}$  in. size, fed by a gravity tank.

The drive is delivered from the engine

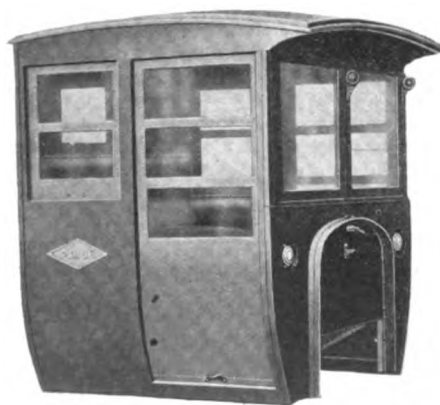


*The Paige 2-ton truck which has been under development for some time has been put on the market to sell for \$2,950*

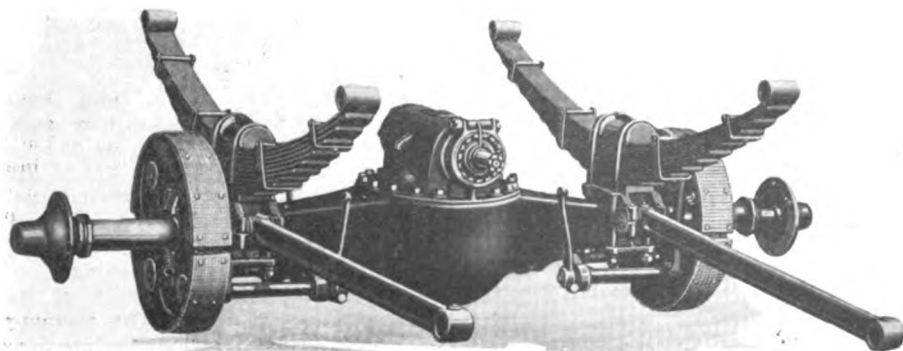
### SPECIFICATIONS OF THE PAIGE 2-TON TRUCK

Chassis price	\$2950
Wheelbase	150 in.
Front tires	36 x 4
Rear tires	36 x 7
Rear axle	Timken
Final drive	Worm
Engine	Continental
Cylinders	Four $4\frac{1}{2}$ x $5\frac{1}{4}$
Ignition	Bosch set spark
Governor	Pierce
Carbureter	Stromberg
Clutch	Multiple disk
Gearset	Selective sliding

through a dry multiple disk clutch, having twelve plates. The gearset is selective sliding, located amidship, while the final drive is through a worm gear. The total reduction in high gear is  $8\frac{1}{2}$  and in low gear 34 to 1.



*The cab may be entirely inclosed against the weather*



*The worm-driven Timken axle is fitted with Timken bearings and the brakes are on the rear wheels*

A Timken worm driven type of rear axle is employed, mounted on Timken roller bearings throughout. The front axle is also a Timken design with full Timken bearings. The brakes are on the rear wheels, the bands being  $3\frac{1}{2}$  by  $\frac{1}{4}$  in. material.

### Back to Business—Let's Start Right

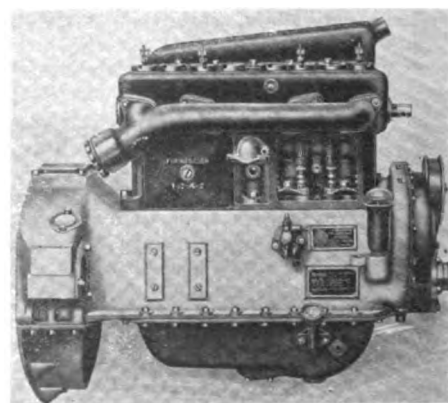
#### Ignition Plant Does Welfare Work

PHILADELPHIA, Nov. 9.—During the height of the influenza epidemic in Philadelphia, the Atwater Kent officials found it necessary to devise ways and means of reducing the percentage of "flu" cases and maintain the efficiency and volume of output.

In line with this idea, the plant was emptied twice daily at 9.45 a. m. and 3 p. m. This permitted a complete ventilation of all offices and workrooms. These periods were devoted to general physical exercises, consisting of calisthenics, deep breathing, brisk marching, etc., in addition to which instructions were given as to the proper hygienic course to be pursued at home and at work to ward off the "flu."

As a result, it was noticed that the percentage of cases was rapidly decreasing, and from the previously high rate the number of new cases was cut in half and has since rapidly diminished.

Persons returning to the works in a convalescent state were required to wear masks furnished by the Y. W. C. A. for five days as a further precaution against infection or spreading of the disease.



*The engine is a Continental four-cylinder, with bore of  $4\frac{1}{2}$  and stroke of  $5\frac{1}{4}$  in.*

# Help the Sun Shine Over There

*This Is an Appeal to You from the*

## UNITED WAR WORK

- 1—Young Men's Christian Association.
- 2—Young Women's Christian Association.
- 3—National Catholic War Council.
- 4—Knights of Columbus.
- 5—Jewish Welfare Board.
- 6—War Camp Community Service.
- 7—American Library Association.
- 8—Salvation Army.

**T**HESE organizations have done the very wise thing of lumping all their campaigns into ONE and making only one appeal to you for funds.

*They Want \$170,500,000*

The campaign began Nov. 11 and ends Nov. 18. Between those dates you will be asked to GIVE MONEY for these various funds. It is not an investment. It is an out-and-out gift. You'll never get back the money, but the money you give will help get back the boys from over there, will make Germany's defeat worse and our own after-the-war conditions better. Give freely.

The war is not over. Our industries have just contributed to a huge Liberty Loan to help bring that war to a successful conclusion. We have invested our money in equipment for our soldiers. We are now asked to give our money for the upbuilding of the morale of that army. No war has ever been fought with as clean an army as America has sent to the Old World. General Pershing has said that every Y. M. C. A. hut adds ten men to a quota of one hundred.

The task of upholding the morale of the army should peace be declared tomorrow is even greater than that during the war. Under the inspiration of patriotic purpose men forget their petty vices and put into their work the enthusiasm and the self-sacrificing spirit that comes from high ideals. *It is human after a great crisis to let down.*

Should peace be declared tomorrow it would be human for men to let down.

If our men and boys are to come back fit for the work of the world which will face them on their return, if they are to take a vital part in the tremendous tasks of reconstruction which face us in this country after the war, they must come back clean and whole, they must come back with the same moral courage to meet the problems of commercial life that they have learned counts for so much in military life.

To state these self-evident facts is simply to state the fundamental value of pushing this campaign for United War Work to a successful conclusion. Presidents and generals, business men and soldiers, have only words of commendation for what has been accomplished. May each individual take to himself a part of the moral responsibility of the world and see that he does his part in the drive that is now on and which will last until Nov. 18.

*Every dollar that you give is a ray of sunshine through the war clouds over there.  
Keep our fighters smiling. The Hun can't stand a smile.  
And smile yourself, and—GIVE.*

# THE LAW

By George F. Kaiser

As It Applies to  
Dealers  
Repairmen  
Garagemen

**T**HE summer being over, the time is now here when dealers should go after unpaid accounts remaining on their books. Dealers who give the proper care and attention to the collection of their unpaid accounts will have cause to be gratified at their success in persuading checks from tardy debtors.

Of course the most desirable way for a dealer to go about collecting the money due him would be to make a personal call on each tardy debtor and have a good old fashioned heart-to-heart talk with him, during the course of which the dealer could impress the debtor with the fact that the money is justly due and owing and must be paid. It is an unusual case, however, where the dealer has either the inclination or the time to make these personal calls; instead he must, as a usual thing, send his representative, which is, in a great majority of cases, a letter.

Many dealers who read this article will be surprised to find on going over their books that their outstanding accounts have assumed such proportion that their sum total threatens to wipe out a good portion of the summer's profits.

When a dealer makes a discovery of this kind he usually starts out determined to make a strenuous effort to realize on the accounts due him, but very often becomes discouraged and stops if the money is not immediately forthcoming, when another letter or two would produce the desired result.

Where a business is conducted upon a strictly cash basis the dealer is not beset by these difficulties. As only a few dealers, however, have succeeded in putting their business on a cash basis the problem confronting most dealers is to try to bring in outstanding money without offending those customers whom he hopes to do business with in the future.

The use of form letters does not always produce satisfactory results, and there is a reason for this. One customer may fail to pay through sheer carelessness; another, because he is absolutely unable to do so; while the third may hold back his remittance because of some fancied grievance. Then, too, there is always that class of debtors who set out to get whatever credit they can without ever expecting to pay.

If the dealer uses a form letter that is the ordinary form letter, and is lucky enough to get checks from some of his debtors, the chances are the checks will all be from one class of the above mentioned debtors—that is, the class his letter appeals to.

## The Purpose

of this department is to help our readers smooth out the legal kinks that now and then cause them confusion in their business. What legal knots are you trying to untangle? Mail them to us. We will be glad to help you. In sending queries, be sure to include copies of contracts and notes to which you refer.—  
EDITOR.

The customers in the other classes will simply ignore the debtor's letter because it contains no special appeal which fits their own particular case.

Jog the memory of the neglectful man, take payments on account from the man who is hard up, meet the man who has the grievance and discuss it frankly with him and go the limit with the dead beat, the chances are that the outstanding accounts on your books will be cut 50 per cent in a short time.

The whole secret of collecting your outstanding accounts is to put yourself in your customer's place and treat him the way you yourself would have to be treated before you would send your own check.

The following letters have been used with considerable success in quite a number of cases, and it is suggested that they be tried together with such special forms as may be found desirable:

### Letter to Neglectful Customer

DEAR SIR: On going over our accounts we find an item of \$70 charged against you which has apparently been due since Aug. 1, 1918.

We appreciate the fact that this item has probably been overlooked in the rush of business.

If you will let us have your check to close we shall be glad to mark this matter off our records and thus avoid bothering you further about it. Very truly yours.

### Letter to Customer With a Grievance

DEAR SIR: On going over our books we find under your account a balance of \$70 due since Aug. 1, 1918.

Inasmuch as this work was done so long ago you may not now be familiar with the details. If you have any doubt as to the amount of the bill we will be pleased to get in touch with you and explain it because we

are making a very earnest effort to do our work right and to make our prices right.

Sometimes a customer does not understand why a job requires so much time or why some item is included in the account. In such a case we gladly go over these things with him. May we have your check or if the account seems like ancient history a call in person? Very truly yours.

### Letter to Debtor of Little Means

DEAR MR. JONES: Mr. Smith, our book-keeper, has called my attention to the fact that he has sent you several statements relative to the balance of \$70 due us since Aug. 1, 1918, but has received no reply.

I am writing you personally because we want to co-operate with you in every way we can, so if you cannot send us a check stop in and let us see if we cannot find some mutually satisfactory way of adjusting this matter. Very truly yours.

### Letter to the "Beat"

DEAR SIR: We wish to advise you that the balance of \$70 due us on Aug. 1, 1918, is still unpaid.

We intend to collect this account and if we cannot collect without suit we will collect it through suit.

Unless your check is received by Friday morning we shall instruct our attorney to bring immediate suit for the full amount of this claim, together with interest, costs and disbursements. Very truly yours.

### Back to Business—Let's Start Right!

## Kept It, So Must Pay

That a person is not entitled to damages for breach of contract in the sale of a motor car by a dealer on the ground that a used car was delivered instead of a new car, where he retains it and pays the balance of the purchase price after he discovers it is a used car, is the decision in another recent case.

Suit was brought for damages for breach of contract on the sale of a used car which the buyer claimed was considerably worn and damaged and had been delivered to him instead of a new car, which he had contracted for. The dealer defended the suit, contending (1) that the buyer had accepted the car, (2) that he had retained it after he had had a reasonable time to inspect it, (3) that likewise he had paid the balance of the purchase price after he had ample time to inspect the car.

The Court held that under the circumstances the buyer was not entitled to damages because if the car was not what he had contracted for he should have tendered it back and refused to pay the balance of the purchase price.



Do YOU Lack

# The Heart of a Fighter?

Here's a Farm Light Man Who Says Motor Car Men Are N. G.—What Do You Think About It?

By CLYDE JENNINGS

"THE motor car dealer—as a class—is not the man to sell farm light because the light is not yet a merchandising proposition, and the motor car seller knows only the merchandising side of selling.

"He is schooled in selling something that there is rivalry to own; that buyers are anxious to pay as much for as they can rake out of their pocketbooks. *He has never been against the obstinate buying opposition and he will not stand the gaff.*"

The speaker is sales manager for a farm light distribution plant that will do more than \$100,000 sales this year. He has been in the business for several years and declares that *"there are not enough plants out yet to advertise the proposition."* He used to be an automobile specialty salesman and he says that he knows many automobile dealers and he likes them personally, and he does not want to appear as a critic of them. For that reason he would not permit his name to be used. But he said some things that fit just the same, and the fact that he is selling farm lighting plants indicates that he knows something of his business.

## Sold Fourteen Plants in Three Weeks

"You see that young man over there talking to the bookkeeper. He has sold 14 plants within the last three weeks. He will make more money this year than some automobile dealers with elaborate establishments and he has not even an office. He brings his orders directly to this office.

"He started in life as a motor car salesman but did not find it exciting enough. Then he took up pianos. That toned him up to meeting the difficulties of selling. He saw slow days ahead in that business and took to farm light. That was several months ago. He is a real salesman and that is what we like. There is the material for making some real salesmen in the motor car trade, but their product is too easily sold to develop them.

"Here is what I mean: These plants are sold to farmers and the farmer is a close buyer and hard to move as a rule. A novice is likely to take out his demonstration plant and work five days or a week and not make a sale. *A single plant sale does not look like much to the salesman who has been selling automobiles and he figures his week wasted, his spirit is broken and he leaves his demonstrator at home.*

## Men With Fighting Spirit Needed

*"That is where he makes his mistake. He may have broken ground for a dozen sales and some day they will come piling in on him. But it needs the man with a fighting heart to do that, and, as much as I hate to say it, we do not find those men in the motor car trade.*

"But another objection. This farm light proposition is *too big for a side line.* Really, I think some motor car men have not gone into it because they know that it is a great big thing. If they got into it, they probably would not want to go back to the motor cars when they are offered to him. It is hardly a departmental business, not for some time yet, because of the selling energy required to place the machines.

"Some argue that it is not as good as the motor car, because there is not the resale. But they are wrong. *It is better for that very reason.* There is no trade-in on any sale, but when a plant is sold it stays sold and the owner, instead of trading in his old plant, comes and buys accessories. We regard each machine sale as a direct prospect for from \$200 to \$500 of accessories, and it easily can be run far above that figure. There is an endless assortment of things to be sold. Even the lamps alone are worth considering. Supposing a man exhausts his community—a thing that never has been done—on plants. Then he can go over each sale and sell water plants, washing machines, churns, and there is even a refrigerator now offered that makes its ice by electricity.

## Developing Distinctive Dealers

"We are developing a line of dealers who are not motor dealers, not electricians, not hardware dealers, not implement dealers, and, in fact, not any kind of a dealer now. They are salesmen with the fighting heart, and they are going to be lighting plant dealers

and in a few years they will have a better business than any of the class of dealers that I have mentioned.

"This is a big business and a growing business. *Now is the time to strike—for there is money.* The farm business is changing. The farmer is coming into his profit that has been lacking for most of the farmers. This is bringing a new element into farming. Every day in this city we see where men with money and business sense are buying farms. While these men are not all of them going to make a success of farming, most of them are going to equip farms as they should be equipped, *which means buying light plants.* That business alone would be an excellent business for a salesman.

"The opening now in the farm light business for the motor car man is *for the man who is ambitious to build up something new.* He can put his service and accessory business under charge of a manager, and while there are no cars, he can develop this business, *if he has the fighting heart.* Then later, when the motor cars come back, he can hire a manager to sell, for the people will be coming in to buy them. But he will want to keep on the job of selling light plants himself. If he is the right kind of salesman, he will by that time have the love of the battle in him, and he will not be content with the motor car business. It will be too tame.

## It Is a Fighting Game

"But I do not want to lead my motor car man to believe that this is a fill in. It is not. Most emphatically not. It is a great, big, hard fighting game that is more than worth the candle."

And then this man took from his desk a great package of photographs. His salesmen take a small picture of each house in which they sell a lighting plant. They were a wonderfully fine average of farm houses, all having neat yards and most of them having a motor car standing in front of them. He also had photographs of several stores of his dealers. In apparent verification of what the sales manager had said, none of these store fronts advertised anything except his lights. And some of them were quite pretentious stores.

*While this sales manager did not say so, the writer knows that he has some motor car dealers who have made good.*

*A Department of*

# BETTER MECHANICS

*No. 88 (Continued)*

*Repairing and Vulcanizing*

## Pneumatic Tire Casings

**P**UNCTURES as a rule are not serious injuries to the casing. Often there is simply a hole which goes through tread and fabric and this does not weaken the casing at all. However, if not repaired in time, water works into the hole, rots the fabric, sand and dirt get in between the layers and loosen the layers of fabric from the layers of rubber and a blowout is the result. The proper thing to do is to vulcanize the hole immediately, then the water and dirt cannot get in and the casing is not weakened at all. A cut which exposes the fabric is in the same class.

1—Rasp out the rubber around the puncture or cut.

2—Clean off all the rubber and dirt from the hole and for an inch or so beyond it.

3—Wash with gasoline.

4—Apply two coatings of cement allowing from  $\frac{1}{2}$  to 1 hr. for each coat to dry.

5—Fill the hole with repair gum.

6—Dust the repair with talc which is shaken out through a cheesecloth bag.

7—Place the air bag inside the casing back of the repair.

8—Place the repair in the sectional vulcanizer.

9—Inflate the air bag.

10—Cure the proper length of time at the right temperature for the kind of gum and cement used.

11—Deflate the air bag.

12—Remove the casing from the cavity.

13—Dip the repair in water to bring out the bloom.

### Outside and Inside Repairs

When the fabric is broken by a stone bruise, blowout or puncture larger than a nailhole, the tread rubber must be removed and layers of fabric taken out and replaced by new fabric. This is done either by the inside or outside method, or a combination of both, the latter being given first.

BY J. HOWARD PILE

1—Remove all the rubber from the tread and side walls for several inches each side of the break. This is done with the rasp or emery wheel.

2—If the break is large and in the center of the tread, remove several plies of fabric clear around the casing and over the beads. If the break is on the side of the casing, remove plies of fabric from one bead only (the nearest one) and step back on the center of the casing under the tread. For 3 and  $3\frac{1}{2}$  in. tires remove 2 plies; for 4-in. tires remove 2 or 3 plies according to the injury; for  $4\frac{1}{2}$  to 6-in. tires remove 3 or 4 plies accord-

ing to the injury. Each layer of fabric removed is stepped down 1 in. from the previous layer. This spreads the joints over a greater area and makes a strong repair.

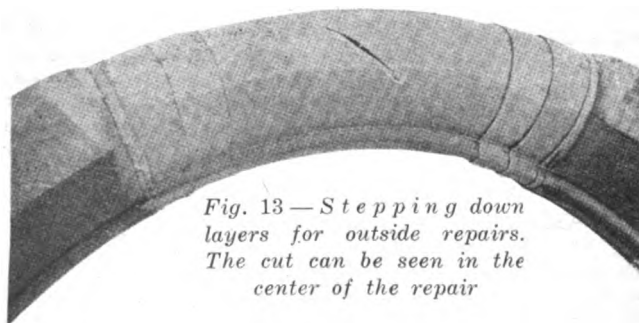
3—Apply two coats of vulcanizing cement, allowing each coat about 1 hr. to dry.

4—Apply the same number of layers of fabric to the repair that were removed, cutting each layer to fit into the space where the old layer was taken out. This fabric is to be frictioned on both sides and coated on one side.

5—Place chafing strips or light weight fabric over the beads.

6—Apply a thin sheet of cushion stock over the fabric, this to be a little wider than the fabric breaker strip.

7—Over this cushion gum, apply one



*Fig. 13—Stepping down layers for outside repairs. The cut can be seen in the center of the repair*



*Fig. 14—Left—Stepping down the layers for an inside repair. Fig. 15—Right—A tread pad to preserve the non-skid pattern*



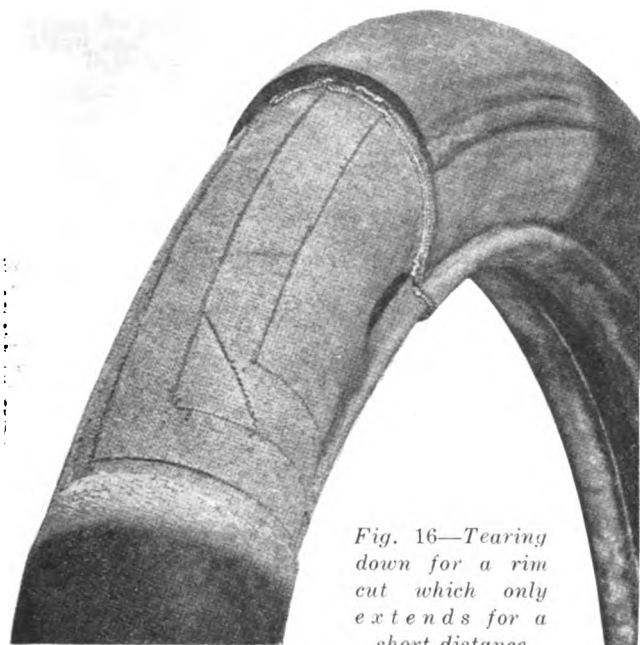


Fig. 16—Tearing down for a rim cut which only extends for a short distance

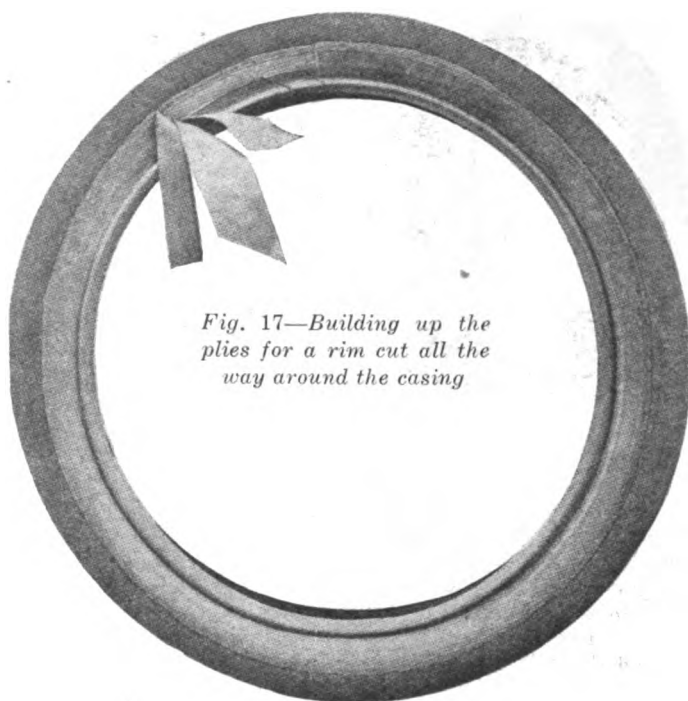


Fig. 17—Building up the plies for a rim cut all the way around the casing

layer of fabric breaker strip, frictioned on both sides and coated on both sides.

8—Over the fabric breaker strip, apply another sheet of cushion gum, slightly narrower than the gum underneath the breaker strip.

9—Ascertain the size and thickness of tread gum necessary to build the repair up to the level of the rest of the casing.

10—Roll plies of tread gum together on the table and then apply the whole to the casing.

11—Trim off the new gum to fit the beveled edges of the old rubber. If this is not done, the new gum will flow over the old rubber during the cure and this may start a separation which will loosen the whole repair.

12—Fill the hole in the old fabric on the inside of the casing with tread gum.

13—Reinforce the inside of the case with a small patch of building fabric placed over the tread gum in the hole.

14—Place two plies of building fabric over this, these to each be larger than the previous one.

15—Dust talc over the repairs, inside and outside.

16—Insert air bag under the repair.

17—Clamp the bead molds in place.

18—Inflate the air bag. Do not use an air bag longer than the section or there will be a distinct mark where the corner of the cavity is forced against the casing, the repair will be rough and the air bag will be weakened.

19—Cure the repair for the proper length of time and at the right temperature for the particular gum and cement used.

20—Deflate the air bag.

21—Remove the bead molds.

22—Remove the casing from the cavity.

23—Remove the air bag.

24—Dip the outside of the casing in water to bring out the bloom.

25—Rasp off any gum that may have flowed over the old rubber and smooth up the repair.

Where outside repairs only are made, omit operations 13 and 14.

#### Preserving the Non-Skid Tread Pattern

Where it is desired to reproduce the original non-skid tread pattern on the repaired section, a pad is made of fabric and rubber and inserted between the repair and the casing.

1—Build up three plies of gum and one ply of fabric.

2—Dust talc over the gum side of the pad thus formed.

3—Place the gum side over a section of the old casing that has the most perfect pattern.

4—Place pad and casing in the sectional vulcanizer and cure for about 30 min.

5—Remove the pad from the casing.

6—Insert pad between cavity and section to be repaired, dusting with talc.

It is desirable that the raw gum should not run over the pattern adjacent to the repair on the old rubber even if it is not necessary to reproduce the non-skid on the repair. To prevent this running over make a mortar of water and talc and spread this inside the cavity. The pattern will make a mould of this and when the heat is applied the paste will dry into a cake and prevent the flow of rubber past the repair.

#### Inside Repairs

The inside method consists of removing and replacing the plies of fabric on the inside of the casing instead of on the outside. This method is used for small breaks and blowouts, as it takes less material. Large cuts or blowouts are better repaired with the outside method or a combination of the inside and outside method. In the inside method, it is not necessary to remove any material from the outside of the casing and no new material need be applied other than to fill in the hole with gum.

1—Remove two plies from 3½ and 4-in. tires, three plies from 4½-in. tires and four plies from 5-in. tires, stepping down the old fabric on the inside around the injury.

2—Bevel the fabric around the injury to a thin edge.

3—Apply two coats of vulcanizing cement, allowing each coat about 1 hr. to dry.

4—Fill the depression with one or two plies of gum.

5—Prepare a patch of the same number of plies of fabric as were removed from the casing, the new plies being stepped up to correspond with the stepped down plies in the old fabric. The last ply should be "bareback" or frictioned on one side only and this should extend 3 or 4 in. beyond both ends of the patch underneath.

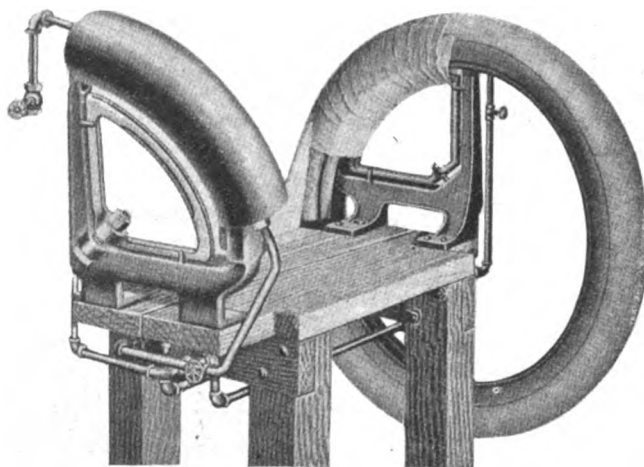


Fig. 18—Curing an inside repair on the inside patch vulcanizer

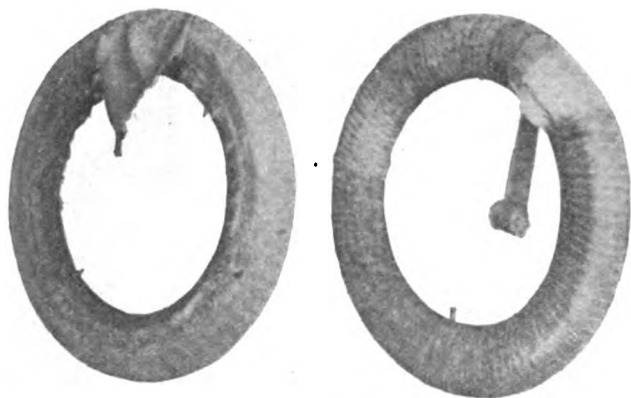


Fig. 19—Wrapping the casing with muslin and putting on the jacket preparatory to curing it in the kettle



Fig. 20—Tread layers. The dark strip is the breaker strip

6—Fill in the hole on the outside with gum after applying cement and allowing it to dry.

7—Dust the new gum on the outside and the patch on the inside with talc.

8—Place the casing on the inside-patch vulcanizer with the patch over the core.

9—Wrap tightly with a piece of muslin, binding the casing tightly to the core well beyond the repair on both sides.

10—Tighten the thumb screw to increase the tension.

11—Cure the proper length of time and at the proper heat for the correct curing of the gum and cement used.

12—Loosen the thumb screw.

13—Remove the muslin wrapping

14—Remove the casing.

#### Rim Cuts

When a rim cut only extends a short distance, the casing is torn down and built up much the same as in the outside method of effecting a blowout repair, except that the work is done on the side of the tire and extends over the bead and the stepping down of the fabric is commenced close to the bead and ended at about the center of the tread.

1—Remove one or two plies of fabric except when the rim cut extends for some distance in which case three plies are to be removed.

2—Step the plies back the same as in outside repairs to blowouts.

3—Apply vulcanizing cement in two coats, allowing each coat about 1 hr. to dry.

4—A breaker strip is not necessary.

5—Replace fabric ply for ply, stepped up to correspond with the sections cut out. This building fabric extends around the toe and heel of the bead and up inside the case far enough to secure a good hold.

6—Apply the required amount of gum to build up the tire even with the rest of the casing.

7—Dust the repair with talc.

8—Place in the sectional vulcanizer with air bag and bead molds.

9—Cure the necessary length of time at the proper temperature.

#### Rim Cut all Around

For rim cuts all around the casing, a different procedure is followed. This repair can either be done in sections in the

sectional vulcanizer, or it can be cured in the kettle.\*

1—Remove the side-wall rubber up as far as the edges of the tread.

2—Remove the old chafing strips and one ply of the fabric, cutting this out at a distance about 1 in. from the beads all the way around.

3—Apply two coats of vulcanizing cement, allowing each coat to dry for about 1 hr.

4—Build up with one ply of building fabric and one ply of chafing fabric which is frictioned on both sides.

5—Roll a patch of gum together on the bench to the necessary thickness to bring it up level with the old case.

6—Apply this gum to the side walls.

7—Vulcanize by either of the two following methods:

#### Sectional Method

1—Place an air bag in one part of the casing.

2—Place this part on the cavity.

3—Clamp the bead molds in place.

4—Inflate the air bag.

5—Cure the necessary length of time at the proper temperature.

6—Deflate the air bag.

7—Remove the bead molds.

8—Move the air bag to the next uncured section of the casing and move the casing around to a new place.

9—Apply bead molds, inflate bag and proceed as before.

10—Repeat this operation till the casing has been cured all the way around.

#### Kettle Method

1—Insert an endless air bag in the casing.

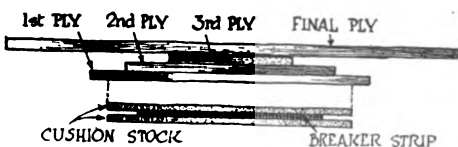


Fig. 21—Sectional view of the layers in the retread

2—Apply the split curing rings and screw the bolts down tight.

3—Wrap the casing and rings tightly with a strip of damp muslin.

4—Apply a heavy jacket which has been previously soaked in water over this muslin wrapping.

5—Cross wrap again with strips of fabric 2½ in. wide, this to be wrapped on evenly and as tight as possible.

6—Inflate the air bag to about 70 lb.

7—Cure in the kettle the required time for the heat.

#### Retreading Casings

This is the most extensive casing repair that the vulcanizing shop is called upon to perform, and it involves tearing down the whole outside of the casing to the fabric and building it up again. There is such a quantity of material used on this repair, and so much labor, that failure to make a successful retread will be costly.

Don't attempt to retread if any of the following conditions exist:

Rubber in side walls in bad condition, cracked, eaten by oil or hardened from age.

Casing fabric torn, rotted, plies separated from each other or oil soaked.

1—Remove the old tread, breaker strip and cushion stock underneath the breaker strip down to the fabric. Successful retreading is not assured where the tread only is removed, as the breaker strip is liable to be full of dirt, separated and rotted from dampness that has worked in through cuts. Tearing down to the fabric enables the condition of the fabric to be observed.

2—The tread can be skinned off if it is in fair condition, but if it is badly cut it can best be removed on a rotary rasp. Whichever method is used, care must be exercised not to cut into the fabric. The rotary wire brush will remove small particles of rubber from the fabric.

3—Do not wash off the fabric with gasoline as this would be absorbed and it would be almost impossible to get it all out. When the repair is cured it would form a gas and cause separation.

4—Apply two or three coats of vulcanizing cement, the first one being light so that it will soak into the fabric, and the second heavy so that it will form a body.

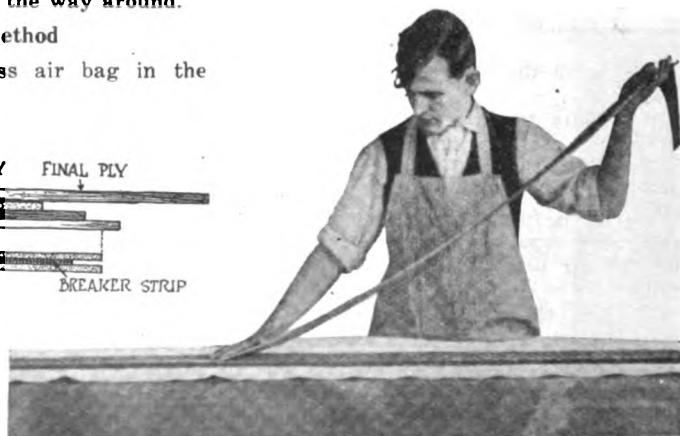


Fig. 22—Building up the tread layers on the bench. This is better than building directly on the casing

5—Apply the tread band by one of the following methods:

#### Built-Up Retread Band

It is not necessary to build up the new tread as thick as the one that was originally on the casing, because the fabric cannot reasonably be expected to wear out another tread this thick. Making the tread too thick is simply adding weight for the casing to carry without being economical.

1—Make up the tread band on the table of from two to six plies of tread gum with an overall ply a good deal wider than the other plies. Use the table to lay out the different plies:

Tire Size	1st Ply	2nd Ply	3rd Ply	4th Ply	5th Ply	Total Plies	Breaker Strip
In.	In.	In.	In.	In.	In.	In.	In.
30	2 3/4	3 1/2	...	...	...	3	2 1/4
32	2 3/4	3 1/2	4 1/4	...	...	4	2 1/2
34	3 3/4	4	4 3/4	...	...	4	3
36	4	4 1/2	5 1/2	...	...	4	3 1/4
38	4 1/4	5	5 3/4	6 1/2	...	5	3 1/2
40	4 3/4	5 1/2	6 1/4	7	7 3/4	6	3 3/4
42	5 1/4	6	6 3/4	7 1/2	8 1/4	6	4

The first ply is the one toward the fabric and a final ply, which is not listed in the table, is placed over everything, the width of this ply being determined after the casing is buffed and cemented. It should be wide enough to come down well on to the side wall and meet the side wall rubber.

2—Apply a layer of cushion gum 1/32 in. thick and 1/2 in. wider than the breaker strip.

3—Put on the breaker strip cut to the width given in the table. This strip is to be cut straight, not on the bias, and the ends should overlap about 1/4 in.

4—Apply another layer of cushion stock the same size as the one under the breaker strip. These layers must be well rolled down and all blisters removed with a sharp awl.

5—Apply the tread band, placing the casing over two bench extensions to hold it in position. Care is to be exercised to center it all around the casing before rolling down the edges. The narrow ply goes next the casing.

6—Roll the tread carefully, work out all the air pockets and those that will not work out are to be pricked with an awl.

#### Manufactured Retread Bands

1—Buff the inside surface of the re-tread band.

2—Apply a light coating of vulcanizing cement.

3—After allowing this to dry, apply a heavy coat of cement and let this dry also.

4—Apply two plies of cushion stock with the breaker strip in between to the casing as suggested in operations 2, 3 and 4 of the previous method.

5—Place a piece of clean muslin over the casing and slip the retread band on the casing.

6—Carefully center the band on the casing.

7—Remove the muslin.

8—Roll the band down securely, removing all air pockets.

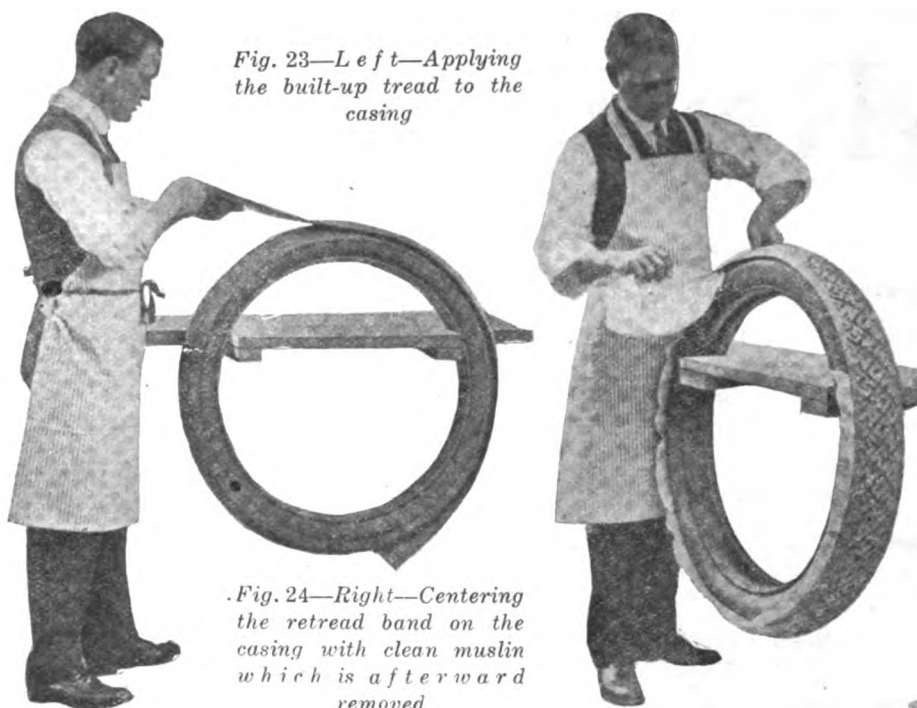


Fig. 23—Left—Applying the built-up tread to the casing

Fig. 24—Right—Centering the retread band on the casing with clean muslin which is afterward removed

#### The Cure

Whichever of the two previous methods of applying a new tread have been used, it is assumed that the repair is now ready for the cure. Continuing the operations therefore—

6—Insert an endless air bag or a re-treading coil in the casing.

7—Apply the split curing rings and screw the bolts down tight.

8—Wrap the casing and rings tightly with a strip of damp muslin. If a re-tread band with a non-skid pattern is used, a thick mortar of soapstone and water is to be put in around the pattern, as otherwise the pressure on the muslin will damage the pattern. If no mortar is

put in and the tread is plain, the tread will show the marks of the muslin wrapping, which is not a disadvantage if the muslin is evenly and carefully wrapped.

9—Apply a heavy jacket which has been previously soaked in water.

10—Cross wrap again with strips of fabric about 2 1/2 in. wide, this wrapping to be put on as evenly and as tightly as possible.

11—If an air bag is used, inflate to about 70 lb.

12—Cure in the kettle for the required time and at the right temperature for the gum used.

13—Remove from the kettle, take off the wrappings and rings and dip the tread in water to bring out the bloom.

#### Back to Business—Let's Start Right

##### Weather Forecasts for Motor Routes

WASHINGTON, Nov. 9—The Weather Bureau of the U. S. Department of Agriculture has arranged, in co-operation with the State Highway Commission of Pennsylvania, to aid motor-truck traffic during the coming winter over the Lincoln Highway between Pittsburgh and Harrisburg by giving out daily information of the weather conditions prevailing over the route and issuing weather forecasts and warnings of heavy snows and cold waves for the region traversed. The plan is for the assistant superintendents of highways at points along the route to report to the Weather Bureau office at Pittsburgh at 8 o'clock each morning by telephone or telegraph the depth of snow or ice on the highway, giving its general condition. These reports are published in the newspapers and furnished to the different automobile clubs, thus becoming available to automobile and motor-truck drivers passing over the highway. The forecasts and warnings are given public distribution and telegraphed to the super-

intendent of highways at Harrisburg, who gives instructions to his forces along the highway to make provisions for the anticipated weather conditions. This service was in operation last winter and gave great satisfaction. The Weather Bureau is ready to give similar service to other traffic routes as may be desired.

#### Back to Business—Let's Start Right

##### Le Cain and Hilliard in the War

BOSTON, Nov. 11—Motor stars are climbing aboard the War chariot here. Jack Le Cain, who has won a number of big races on tracks and speedways, and who was smashed up badly at Indianapolis 2 years ago, and sent to the hospital to die, has been enrolled as a First Lieutenant in the Motor Transport Corps and ordered to France. Bill Hilliard, who captured the spectacular "Climb to the Clouds" up Mt. Washington some years ago, and also the Light Car Race at Savannah, and a number of other events, has been sent across as an ambulance driver.



# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1591—BATTERY-PLATE PRESS

A battery-plate press is made by mounting three or more 6-in. C-clamps in a board 7 in. wide. The clamps are held to the board by fastening them in grooves 8 in. apart. A vertical board is attached to the grooved board, this butting against the stationary end of the clamps. Wooden blocks the size of the plates are placed between the screw end of the clamps and the plates.—Kelsie Click, Berne, Ind.

## No. 1592—ACCELERATOR-PEDAL EXTENSION

●An extension to the accelerator pedal is made with a strap hinge one-half of which is screwed to the bottom foot board, the other half resting on the pedal. Pushing on any part of the free half of the hinge with the foot will depress the pedal. The size of the hinge will depend on the distance from the pedal to the angle of the floor boards.—C. Crowley, Cole Motor Sales Co., Valdosta, Ga.

## No. 1593—WRENCH FOR REO CONNECTING-ROD BOLTS

A special wrench for the connecting-rod bolts on the Reo is made from a piece of steel the same size and shape as the wrench supplied by the manufacturers, the difference being that the hexagon is so cut that the corner comes at an angle instead of in line with the center of the wrench. By turning the wrench over, the nut can be taken in any position.—Charles E. Bemis, Cartwright's Garage, Rocky Ford, Col.

## No. 1594—WRENCH FOR FORD REAR CONNECTING-ROD BOLT

The rear connecting-rod bolt on the Ford is easily removed by using a ratchet socket wrench with a 9/16-in. socket. The arm should have a swing of 3½ in. and the distance between the cranks of the arm should be 3 in. This enables the bearing to be removed without taking off the cylinder block.—A. Schnavely, Mulvane Garage, Mulvane, Kan.

## No. 1595—RIVETING FORD TRANSMISSION LININGS

An old Ford transmission drum is used as an anvil to hold the heads of the rivets when riveting new Ford transmission linings. The hub of the drum is held in the vise and the band and lining with the rivets in place slipped on over the drum. This device keeps the lining true.—Leon Blimlin, Peoples Auto Supply Co., Reading, Pa.

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

1—Describe the shortcut briefly but clearly, in few words.

2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.

3—Write on ONE side of the paper only.

4—Sign your name and initials, the name of the company you are with, and the town.

*Write plainly. If your name is unusual, print it in capital letters.*

## No. 1596—TUBE DEFLATER

Tubes are deflated by constructing a little frame with nails driven through the bottom part and a row of corresponding holes drilled in the top part to hold the valves of the tubes. When the valve is put into the hole, the nail pushes in the valve plunger and releases the air.—A. C. Heck, Heck's Tire Repair Co., Wichita, Kan.

## No. 1597—BATTERY-SEPARATOR INSERTER

A block of wood grooved to fit the separators enables them to be pushed into place between the plates without break-

age or splitting. The block is 6½ in. long and about 4 or 5 in. wide with a rounded edge and a finger grip opposite the groove. The groove is ¼ in. wide and ¼ in. deep.—Kelsie Click, Berne, Ind.

## No. 1598—WRENCH FOR FORD DIFFERENTIAL CASE

A speed wrench for assembling or taking down the Ford differential case is made in the form of the familiar jew wrench with the addition of a brace or handle to turn the wrench and a support for this brace. The brace is connected to the wrench with a universal joint so that it can be worked at an angle. The coil spring keeps the 5/16-in. sockets on the bolt and nut at the same time.—J. C. Williams, Oldham Auto Co., La Junta, Col.

## No. 1599—REMOVING SQUEAKS AND RATTLES

Rattle, squeaks and play are removed from doors and bodies by loosening the front and rear pair of bolts that hold the body to the frame. The body is then pried up from the frame and a piece of brake lining inserted around each of these bolts, a slot being cut in the lining to enable it to go around both sides of the bolt. The bolts are then tightened up.—C. Crowley, Cole Motor Sales Co., Valdosta, Ga.

## Back to Business—Let's Start Right

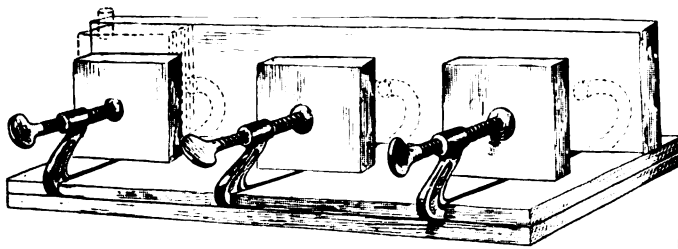
### Puts Parts on Display

ST. LOUIS, Nov. 8—The Johnson Automobile Co., Ford dealer, has removed the parts bins from the second floor to the show room, where the public can have access and a salesman is in charge. This is an experiment in a double form—first to help the parts business by letting the car owner see the parts and second in hope that the car owner wanting to buy will make the selection himself and save shop help.

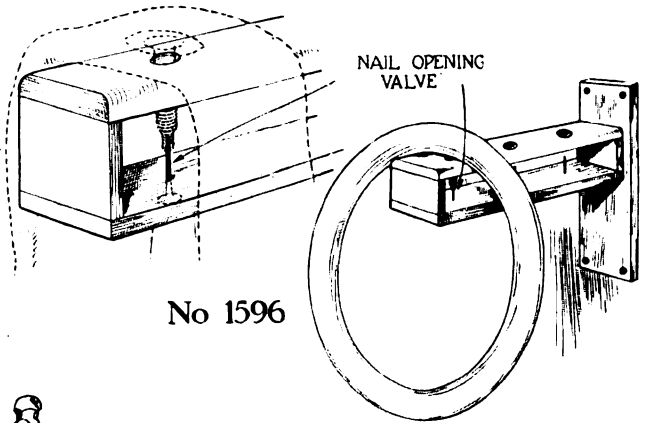
## Back to Business—Let's Start Right

### Tracy Influenza Victim

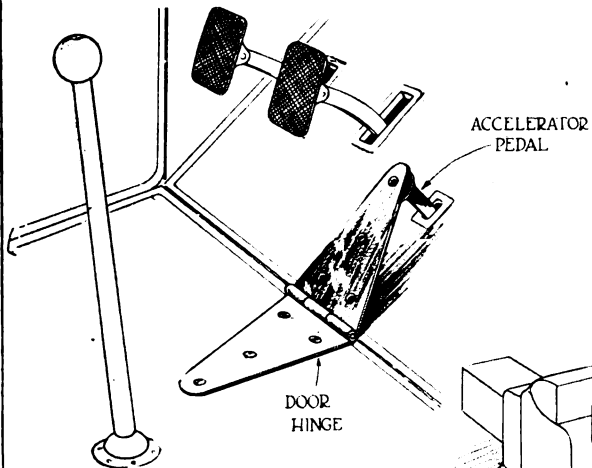
WASHINGTON, Nov. 9—Percy Tracy died here last week, a victim of influenza followed by pneumonia. Tracy, recently buyer of parts for the Army trucks under Christian Girl, who called him to Washington, had just lately accepted the position of trailer purchaser under Col. Glover in the Quartermaster Department. Prior to the war he was the buyer for 5 years for the Paige Detroit Motor Corp, and at one time acted in the same capacity for the Premier Motor Co.



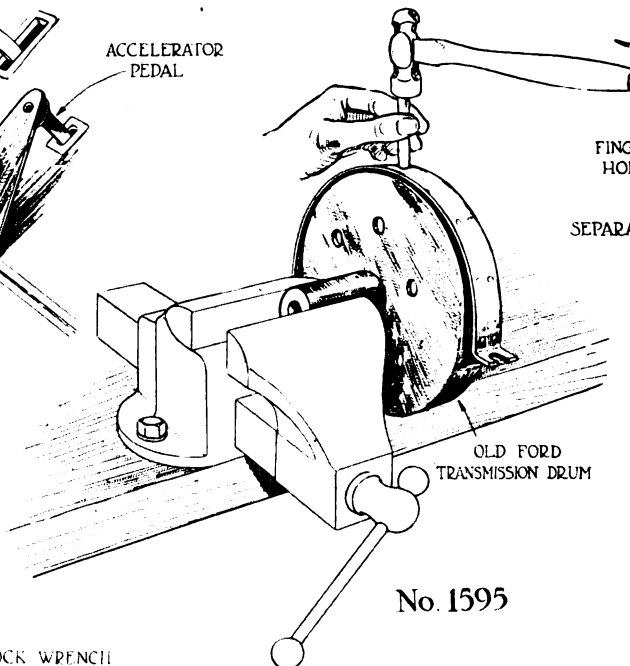
No. 1591



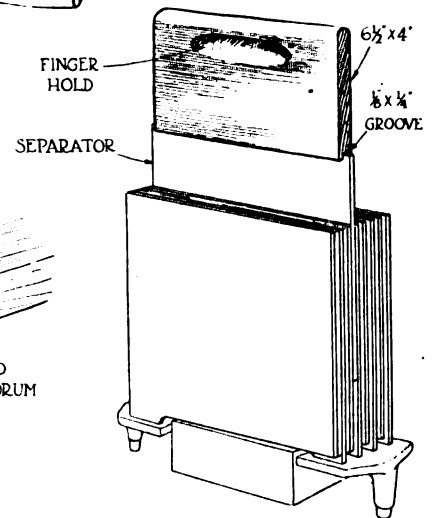
No 1596



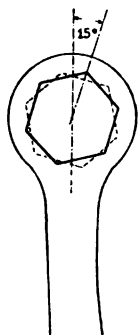
No. 1592



No. 1595



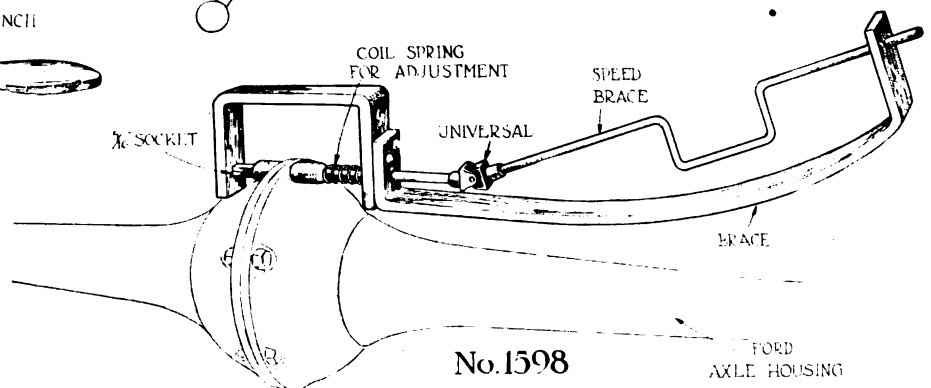
No. 1597



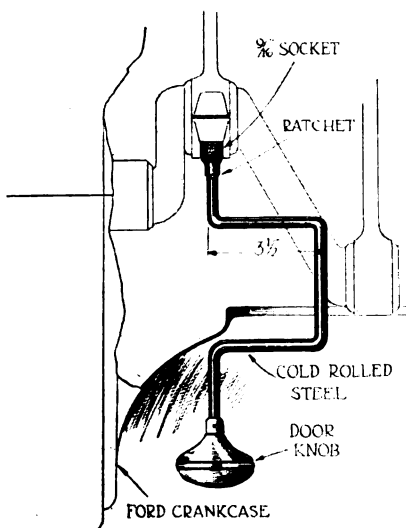
No. 1593



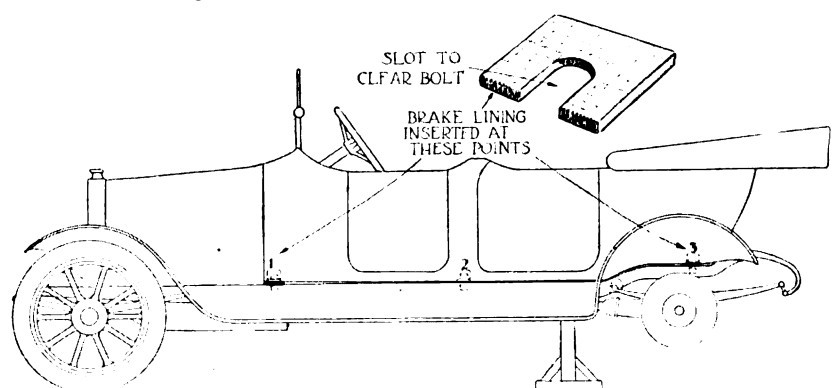
STOCK WRENCH



No. 1598



No. 1594



No. 1599

# Editorial Observation

## The March of Progress

IT is hardly necessary to repeat what Motor World and others who have keenly watched developments have found, which is that service must go with the tractor and that the motor car dealer is the only one in the field who knows how and is equipped to give service with a mechanical product.

*The old-time implement dealer must learn to give service and must fit up a service station before he can expect to take part in the march of progress.* No matter where the sympathies of the old-line makers may lie, they must have their product sold through service-dealers or drop behind.

Some of them already admit the truth of the situation and are turning to the automotive dealer, while others heed the cry of the old-line implement warehouse operators that the "tractor business *belongs* to them," and believe they will stick to the old-liners in the hope that they may come through and give service. Of course, once in a while an old dog learns a new trick, but the instances are few.

Because the old-liners see the selling of tractors going with rapid strides to the automotive dealer they are raising a mighty howl. Those trade papers which go to the old-liners think they are serving their readers when they calumniate the automotive dealer and aim shafts at the newer group of tractor makers, such as Ford.

The newer makers have put real engineering into their machines and have produced correct designs, with inclosed gears which exclude dirt and prevent wear, with modern motors and other up-to-date points, which did not appear in the old-line field until the newer makers compelled it by giving engineering competition.

Naturally Ford is the target because he is the biggest manufacturer of automotive dealers in the business, and if those who criticise would confine themselves to facts it might not be so apparent that they are excited and alarmed. As it is, this calumny from the old-line field is the typical wail of a loser who has no good arguments, so he resorts to mud throwing.

A typical example appears in an old-line implement dealer paper, which says: "On October 19th, at Hempstead, L. I., was held an important tractor demonstration under the auspices of the Nassau County Farm Bureau.

"Among the real tractors that worked to show the farmer were the Moline Universal, Case, Titan, Cleveland, Parrett and Maxim. The Fordson was also there, and as one correspondent said, the young man operating it gave some beautiful lectures. The engine was cooling off every minute."

From this statement one would be led to believe that the Fordson had trouble all day and made the poorest showing. This is not true. A member of the Motor World staff was there and paid particular attention to the difficulties encountered by all of the tractors. And they all had difficulties.

All of them had trouble emerging from a depression, or ditch, at which point the plows would dig in deep and stop the machines. The Fordson stopped once. Some of the others stopped two or three times.

Statistics were kept by the officials. In cost per acre the Fordson was fourth in a list of eight. In time of plowing it was fifth in a list of eight. In acres per hour it was fourth in a list of eight. It gave a good average performance.

Furthermore, Motor World men have watched numerous tractor demonstrations, and generally the Fordson is somewhere between the leaders and the tail-enders. It seldom heads the list and, to our knowledge, has never been a tail-ender. As to its spending its time cooling at Hempstead, that is purely a myth and in a class with most of the other lamentations from the unprogressives.

Tractor selling demands service. If the old-liners can educate themselves in service they will be among the tractor dealers of the future and they will sell the wares of manufacturers who see to it that service goes with their tractors. Selling a tractor without service is a sure way to kill the business of a dealer or manufacturer.

With the recent sudden growth of the tractor business new methods have been found necessary. The unfit will pass out and the fit will remain. The opposition of the unfit can no more halt the march of progress than the Senegambian can resist the oncoming of civilization.

## Letters from Readers

*THIS page is for the use of MOTOR WORLD readers with something to say. Letters on subjects of interest to dealers, garagemen, repairmen and jobbers are always welcome.—EDITOR.*

### That Winter Business Number

Editor Motor World: We attach hereto copy of our general letter No. 46 of Nov. 1, with enclosure which accompanied it, as we believe you will be interested in its contents, and we are passing it on to you for your information.—E. H. Bryant, Fordson Distributer, Columbus, Ohio, by Dick B. Brunn, Sales Manager.

#### All Authorized Sales and Service Dealers

##### Re: Importance of Trade Papers

Gentlemen:

A good many of our dealers are subscribers to trade papers, and as these periodicals contain so much that is of assistance and of vital importance to your business we take occasion to call this point to your attention.

The trade papers are now devoting a good portion of their pages to tractor matters. The Motor World and Motor Age are among the most important of these publications. "Fordowner" is also devoting space to the Fordson tractor. There are other good publications also. We urge you to subscribe for one or more of these representative trade papers in case you are not already doing so, as the cost is very small in comparison with the profitable ideas and the benefits which you and your organization can derive from them.

The Motor World for Oct. 16 is about the best issue we have ever seen of any trade paper, and if every dealer would study it and take advantage of the suggestions therein, its value to him could not be over-estimated.

We attach some extracts from Motor World of Oct. 16, which we believe you will find of much value and interest.—E. H. Bryant, Fordson Distributer, per Dick B. Brunn, Sales.

#### Extracts from Motor World for Oct. 16,

##### 1918—These Articles Will Interest Fordson Dealers

E. H. Bryant, Fordson Distributer  
BUY NOW! BUY NOW!

"One Fordson owner uses the winter months for a heavy sales campaign by mail, telling prospects they may not be able to get a tractor when they want it in the spring unless they buy in winter."

#### STUDY HORSE'S SHORTCOMINGS

"Study what it costs to feed a horse the year round. Learn how often the horse must be shod, and what the ex-

pense. Learn the cash value of a horse, his harness and wagon. Find out the average working life of the horse. Do the same in every detail for the tractor, and include relative proportions of risk in accident to the finest detail on both sides. When you know these facts you can sell tractors."

#### USE LOCAL NEWSPAPERS

"Use the local newspapers to boost retail tractor sales," says J. Heilligenthal, Lyons, Wis., motor car, tractor and implement dealer. Heilligenthal is one of the best patrons of Walworth County newspapers, which reach every farm in his territory. He goes further than to advertise by displays. Ever so often he gives the editor a list of the tractor purchases which is published together with a little article about the satisfaction given by his machines. The editor gives this space without cost, in appreciation of his advertising patronage."

### Safety First!

We printed the picture at the right and received the following letter:

Editor Motor World: Attached is a picture taken from your issue of Oct. 30. Safety First!

1—Every rubber company in the world cautions employees against getting inside a tire when buffing. The wire brush will often pull a tire out of the operator's hands. Being inside will invariably cause injury when this happens.

2—Rubber filings are as slippery on the floor as soap. Notice the lady has one foot off the floor, resting on a box covered with rubber dust. A very dangerous proceeding around a buffer. Keep both feet planted firmly to get greatest leverage with least effort.

Would suggest closer criticism in connection with photos for publication. The new vulcanizer might be led into danger. This is only a suggestion, however.—The Fisk Rubber Co. of New York, C. E. Lavender, Service Manager, Toledo Branch.

### SELL TRACTORS TO NEIGHBORS OF YOUR OWNERS

"Direct your winter selling efforts toward neighbors of a man using your tractor. They have seen this tractor work, know how nearly their land is like his. Use his work last summer as your demonstration."

Back to Business—Let's Start Right

### Needs Two Motor Worlds

Editor Motor World: I think my subscription has almost an even half year to run, and, for the remainder of that time I intend to try out a new method of keeping track of the valuable articles. Instead of attempting to index the articles, I propose to cut them out and keep them in large envelopes under the separate headings, such as "Reilly Stories," "Better Mechanics," "Repair Shop Kinks," etc.

Many times this will mean that one side of a sheet should go into one envelope and the other side into another, so I will have two copies come to the same address. (You could put them in the same wrapper.)

I am inclosing \$1 to pay for the extra copy for the half year, and you can send it from such date as will make it run out the same time as my present subscription.—Herbert A. Fiske, 1800 Acushnet Avenue, New Bedford, Mass.



Mrs. I. B. Lloyd, who owns and operates a tire repairshop at Santa Barbara, Cal., says there is nothing unnatural or demoralizing in a woman throwing a tire over her shoulder or wearing overalls while at work. She is making a success of the undertaking, and has built up a substantial trade.

## The Spirit That Wins

Editor Motor World: Your article in Motor World of Oct. 30 (page 11) suggested to me the following words, and while, maybe, they are not good enough to publish in your magazine, yet I am sending them to you "just for fun."

I came here to try to keep my son's business for him, while he is working for Uncle Sam, and have been very much interested in the articles published in your magazine as to how to keep things going through this trying time.

The articles I have read there have been of the greatest help to me, as I came here without the least idea of how I was going to get along, yet with a determination to do my best, and study all the helps I could find.

Your magazine heads the list in "helps."—H. J. Brown & Co., Providence, R. I., Mrs. M. E. B., Manager (pro tem.).

### To the Motor World

While sitting in my office,  
At the close of a trying day,  
I glanced at the motor magazines,  
To see what they had to say.

I was all alert for suggestions  
To help through the business lull,  
To find out what men were doing  
When automobile work was dull.

For you see I am only a woman  
Who is trying to do her share  
To keep things moving "over here"  
While my boys are "over there"—

"Over there," where the cannon thunders,  
Battling for the cause of right,  
Showing old Kaiser William  
That the Yanks do know how to fight.

So in the MOTOR WORLD I read  
About the "Rubber Man"  
Who in his leisure hours  
Wrote the song called "Georgia Lan'."

I thought of the many dealers  
Who have been so terribly "hard hit"  
By this cruel, cruel struggle,  
Yet who are bravely doing their "bit."

What's the use, though, to spend time in complaining?

Show our boys we are ready to bear  
Any burden, no matter how heavy,  
That will help them to win "over there."

So keep up your courage, my brother;  
Be strong both to do and to dare,  
For though now a dark cloud may hang o'er you

A "silver lining" is surely there.

The time is very soon coming

When the Hun will have to go.

This comes from Providence, down in "Rody,"  
The firm of H. J. Brown & Co.

"PEGGY" BROWN.

**Back to Business—Let's Start Right**

## His Inlet-Valve Stems Carbonize

Editor Motor World: I have a Chalmers Six-30 model (1915). The exhaust valves on cylinders 1 and 2 carbon rapidly on the stems and the valves stand open. I have to grind and scrape the valves about every three weeks. The valves are new, as are the valve-stem guides. Could you give me any reason for the valves acting in this manner?—Harold Wyatt, Camden Auto Co., Camden, Ind.

**Reply**—We can only make a guess as to the cause of your trouble because you have not supplied enough information to enable us to give you an exact answer. If you are troubled with an excessive amount of carbon in the combustion chamber of the two front cylinders the cause is easy to locate. This would indicate that too much oil is getting past the piston. This would be caused by leaky rings, a scored or worn cylinder or a warped cylinder. This oil would burn to carbon and collect on the inside of the cylinder head, piston top and on the exhaust valve head and stem. It would also collect on the inlet valve.

As a rule the carbon on the exhaust valve bakes hard as glass because the exhaust valve is always the hottest part of the combustion chamber. If the carbon is not baked hard, the cylinder is

not giving full power for some reason or other, probably through lost compression. The carbon that collects on the intake valve is of a gummy nature, because this valve is kept cool by the incoming charges and much of the oil will not turn to carbon. The appearance of the intake valve in a properly operating cylinder would be oily or there would be a light coating of greasy carbon. The exhaust valve would either have a coating of carbon baked on hard or else it would have a rusty appearance.

We cannot account for excessive carbon on the valve stems without a corresponding amount of carbon in the cylinders unless there is some way for oil to get into the exhaust passages, and even this would not cause an excessive amount such as you experience, as it would be blown out with the exhaust, leaving only a slight amount of carbon.—Editor.

**Back to Business—Let's Start Right**

## Who Will Give Us This Information?

Editor Motor World: If you are in a position to do so, will you please send me the trial balance, or closing figures, of three or four automobile sales companies whose gross sales during twelve months were approximately \$200,000, these to be companies that do not do a wholesale business but do a retail business and operate a fair size service station either with or without storage facilities.

I would, of course, not expect that the names or locations of the companies whose statements you might send me would be shown.—BOSTON READER.

*Back to Business  
and Start Right*

## Tractors at the Hempstead Demonstration



At the left is the Knickerbocker Form-A-Tractor pulling two plows. The Maxim is seen in the center, the operator walking beside it while the tractor steers itself down the furrow. At the right is the Moline Universal pulling up out of a ravine which crossed the furrows



# The RETAIL NEWS

## New Truck and Tractor Dealers

**The John Lauson Mfg. Co.**, New Holstein, Wis., has appointed the following new distributors: **The McBee Engine & Implement Co.**, Memphis, Tenn.; **Charles Gray, Lamar, Ark.**; **the Holt Motor Co. of Watertown, S. D.**; **Soderburg Bros.**, Galva, Ill.

**The Stowe Supply Co.**, Kansas City, Mo., distributor of implement supplies and farm equipment in the West Bottoms, has arranged for a ten-year lease of the Studebaker Building at Thirteenth and Hickory Streets. **Edward O. Faeth** is president of the Stowe company. The 10-story building, one of the largest in the implement district, affords nearly 150,000 sq. ft. of floor space in contrast to the 28,000 sq. ft. in the building now owned and occupied by the Stowe Supply Co. at 1412-14 West Twelfth Street. The Stowe company will take possession Dec. 1, after the building has been remodeled. Under a sub-lease the vehicle division of the Studebaker Corporation will occupy the third and fifth floors.

**The Cleveland Tractor Co.** has appointed **A. W. Crossman** as district representative with headquarters at 604 Brockman Building, Los Angeles, Cal. The territory under the supervision of Mr. Crossman comprises California, Washington, Oregon, Arizona, Utah, Nevada and Idaho.

**The Franklin Motor Car Co.**, Bloomington, Ill., has taken on the Case line of tractors.

**The Sanford Motor Truck Co.**, Syracuse, N. Y., has appointed the following dealers: **Donohoo Horse & Mule Co.**, 2701 Second Avenue, Birmingham, Ala.; **W. L. Fanshawe**, Box 269, 322 High Street, Burlington, N. J.; **Joe Willoford**, Ardmore, Okla.; **J. H. Lincoln, Jr.**, Henryette, Okla.; **Isaac Plasterer**, Lebanon, Pa.; **L. A. Barley**, Lancaster, Pa.; **Elano Zimmerman**, Manheim, Pa.; **Herr Bros.**, Quarryville, Pa.; **Central Garage**, Clinton, Conn.; **C. E. Norton**, Guilford, Conn.; **Raoul M. Delagrange**, Stonington, Conn.; **Frisbie-McCormick Co.**, Norwich, Conn.; **Martin B. Dodd**, Norfolk, Conn.; **J. F. Falconer**, Springfield, Mass.; **H. W. Osgood**, 673 Connecticut Avenue, Bridgeport, Conn.; **Mr. Dell**, Dell's Garage & Service Station, Hartford, Conn.; **S. L. Benedict**, 73 North Main Street, South Norwalk, Conn.; **New England Motor Sales Co.**, 23 Putnam Avenue, Greenwich, Conn.; **E. J. Denning**, 55 West Main Street, Stamford, Conn.; **Jefferson Auto Co.**, 27 Jefferson Street, Waterbury, Conn.; **Central Garage**, 36 Third Street, Derby, Conn.; **G. Martin & Day Garage Co.**, 127 Colony Street, Meriden, Conn.; **William Luby**, 9 South Colony Street, Wallingford, Conn.; **Park Avenue Garage**, Meadville, Pa.; **P. Mori & Co.**, Loyalhanna, Pa.; **Woodling Auto Co.**, Haysville, Pa.; **T. C. O'Rourke**, Washington, Pa.; **J. P. Mooney**, McKeesport, Pa.; **J. L. Culp**, Indiana, Pa.; **Elite Garage**, Charleroi, Pa.; **W. C. Laderer & Co.**, Butler, Pa.; **Maurice Machine Co.**, Jeanette; **National Auto Co.**, Uniontown, Pa.; **Rose Bros. Auto Co.**, Greensburg, Pa.; **R. M. Robb**, Latrobe, Pa.; **Snyder Bonzo Baker Co.**, Bellevue, Pa.; **A. E. Sarver**, Bellevue, Pa.; **D. L. Shaffer**, Kittanning, Pa.; **Wells Mills Elec. Co.**, Connellsville, Pa.; **J. A. Stokes**, Blairsville, Pa.; **Myers Carriage Co.**, Franklin, Pa.; **Carnahan Transfer & Storage Co.**, Oil City, Pa.; **Overland-Warren Co.**, 617 East Penna Avenue, Warren, Pa.; **Dooler & Emery**, Skowhegan, Me.; **O. F. Files**, Post Office Square, Bangor, Me.

**The Parker Motor Sales Co.**, 518 North Broad Street, Philadelphia, has been ap-

pointed distributor, for Philadelphia County, of International motor trucks.

**Forbes Motor Sales Co.**, Clinton, Ill., has taken the Inter-State tractor agency.

**Leonard Roeder**, Tonica, Ill., has taken the agency for the Inter-State tractor.

**The Lauson Mfg. Co.**, New Holstein, Wis., has appointed the following agents for its tractor: **Johnson's Garage**, Secor, Ill.; **L. A. Green**, Dayton, Ill.; **Weston (Ill.) Grain Co.**; **Lochner & Amidon**, Herscher, Ill.; **Joseph Abels & Co.**, Forreston, Ill.; **Sass Bros.**, Streator, Ill.; **Bert A. White**, Pontiac, Ill.; **Weishaar & Son**, Ashton, Ill.; **Duke Bros.**, Henry, Ill.

**The Rockford (Ill.) Oldsmobile Co.** has decided to add tractors and will be distributor in the Winnebago County territory for the Emerson-Brantingham machines. This is the first passenger car firm in Rockford to add tractors.

**Henry Mossbach**, Seattle, Wash., has been named state distributor for U. S. trucks, and together with **H. A. Parker** is building a strong sales organization. Headquarters have been opened at 1421 Tenth Avenue.

**Pioneer Auto Co.**, Seattle, Wash., has taken the agency for Case tractors for western Washington territory and will open a sub-agency at Bellingham, Wash., in order to cover the northern portion of the state.

**The H. M. Covey Motor Car Co.**, Portland, Ore., has been named as distributor for Master trucks. Its territory including all of Oregon and the southwestern counties of Washington.

**J. A. Freeman & Son**, Portland, Ore., have secured the agency for the All-Work tractor.

**The Parker Truck Sales Co.**, Chicago, Ill., has been added to the family of Parker distributors. The Parker Truck Sales Co. is a partnership composed of **George M. Marks** and **J. L. Kinkelstein**.

**George B. Welmer**, San Jose, Ill., has taken the agency for the Inter-State tractor.

**The Bigelow-Willey Motor Co.**, 304 North Broad Street, Philadelphia, has been appointed distributor of Bessemer motor trucks

in that territory. The Bessemer company, now of Grove City, Pa., is building a new plant in Holmesburg, just outside Philadelphia. The Bigelow-Willey company also is distributor for Paige automobiles.

**The Pacific Motor Car Exchange Co.** has opened salesrooms at 1687 Broadway, New York, for the sale of trucks, tires and used cars.

## Developments in Garage and Repairshop

**John S. Gustine, Jr.**, is building a stone garage to cost \$2,400, on a site 23.6 x 25.6, at 6438 Woodbine Avenue, Philadelphia.

**J. R. Keim & Co.**, Philadelphia, will build an addition to cost \$1,500 to the garage at Allegheny Avenue and Hancock Street.

**Dill & Collins Co.**, Philadelphia, are building a garage to cost \$18,000 on a site 56 ft. x 74 ft., at Tioga and Brahan Streets.

**The Wisconsin Wagon Co.**, 113-123 South Blair Street, Madison, Wis., announces the establishment of a motor service repairshop, which opened Nov. 1 under the supervision of **Thomas F. Butzen**, formerly connected with the Overland-Madison Co., distributor of the Overland.

**The Fond du Lac Motor & Welding Co.**, 210-212 South Main Street, Fond du Lac, Wisc., has been organized by **John E. Evans**, formerly of Detroit, and will specialize in motor car repairs, general machine work, welding and cutting processes.

**The Carlinville (Ill.) Motor Sales Co.** and the **Berman Implement Tractor & Truck Co.** of that city have merged and will be known hereafter as the **Carlinville Motor & Implement Co.** Under the new arrangement **Frank and Herman Berman** and **W. A. Craggs** will look after the office, garage and service departments, while **A. W. Crawford** and **H. W. Woodmansee** will be on the road, looking up prospects in the adjacent territory.

**The Rubber Preserving Co.**, manufacturer of "Kepuruber," a liquid to prevent the deterioration of tires and other rubber articles, has established sales offices at 752 Otis Building, Chicago.

**The Simmons Motor Car Co.**, Cleveland, Ohio, has moved from 1971 East Sixty-fifth Street to larger quarters at 4400 Euclid Avenue. The company is **Chandler** car distributor in Ohio.

## A Real "Woman in Industry" and a Farmer

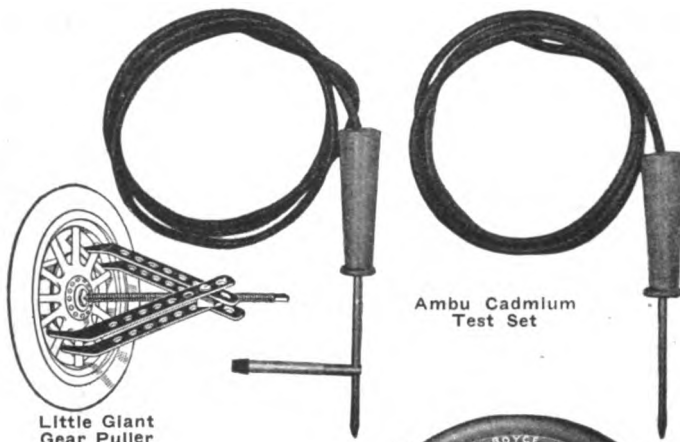


**MISS NELLIE M. SCOTT**, president of the Bantam Anti-Friction Co., Bantam, Mass., owns a farm in Michigan, and in the summer on her vacation she drives a tractor, and is here shown harvesting barley. At other times she is a real "woman in industry," for she is a real honest-to-goodness president of a corporation

# Automotive Equipment

## LITTLE GIANT GEAR AND WHEEL PULLER

This is an adjustable gear and wheel puller consisting of four arms drilled at a number of places to enable the device to be used on a variety of work by changing the position of the clamps on the nut block. The puller is capable of pulling wheels, gears, pulleys, etc., and can be equipped with a pair of extension arms for extra long work. Price \$10, extension arms \$1.—Premier Electric Co., 4032-4042 Ravenswood Avenue, Chicago.



Little Giant Gear Puller

Ambu Cadmium Test Set

## EWALD TIRE RETREADER

This is a hand-operated machine that staples a casing with the beads cut off on top of another casing which is badly worn. The insides of the staples are covered with a strip of fabric to prevent chafing the tube. The outfit consists of the stapling machine, 500 staples, reliner cement, reliner for staple heads and full directions. Price \$15.—Romort Mfg. Co., Oakfield, Wis.



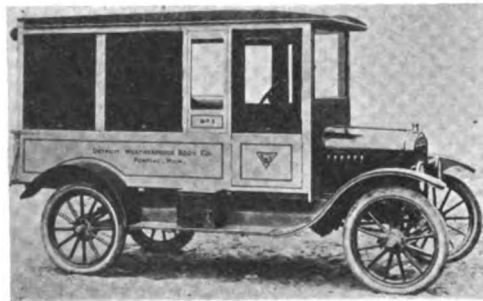
Ewald Tire Retreader

## MILLER CARBURETER FOR FORDS

This is a multiple-jet carbureter for Fords, the design being such that it fits the existing Ford manifold without change. A stove that fits over the exhaust manifold is provided with a hot and cold-air regulator that is operated from the dash. There are no springs or adjustments, the amount of fuel being automatically proportioned to the demand of the engine. Price \$22.50.—Harry A. Miller Mfg. Co., 219 East Washington Street, Los Angeles, Cal.

## DETROIT WEATHERPROOF BODY FOR FORDS

A light body for the Ford chassis. It can be instantly closed to protect the load from damage by rain or can be as easily opened up. The sides of the body and the driver's compartment are closed in when desired with curtains which slide straight down. When these curtains are up, they house flat in the top deck out of the way and protected from damage. The body itself is made light,



Detroit Weatherproof Body, Open and Closed

yet strong. The rear may be protected with a roll curtain. The complete equipment includes doors, dash, windshield, seat and cushions. Price \$65, painted in any color.—Detroit Weatherproof Body Co., Pontiac, Mich.

## AMBU CADMIUM TEST SET

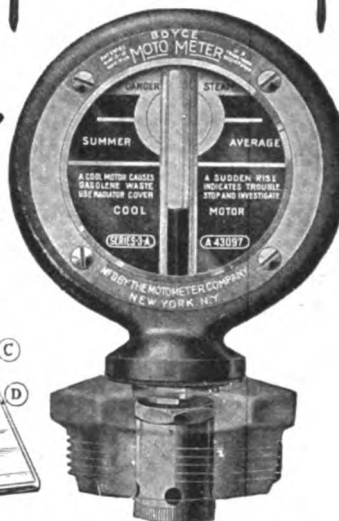
This is a set of two leads for testing the voltage of positive and negative plates of a storage battery independently of each other. The cadmium pencil is covered with perforated rubber and this, when dipped in the electrolyte, forms an inert pole, the other lead being connected to the plate group to be tested, a voltmeter being in the circuit. Price \$3 for the leads, leads and voltmeter \$25, voltmeter only \$22.50.—American Bureau of Engineering, Inc., 1018 South Wabash Avenue, Chicago.

## BOYCE MOTO METER PRICES

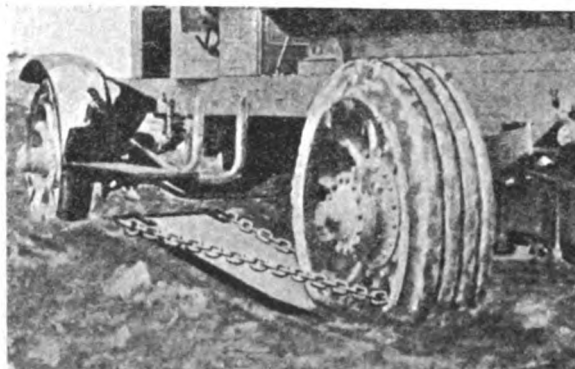
The present prices of the Boyce Moto-Meter are:

Standard Model.....	\$10.00
Universal Model.....	7.50
Junior Model.....	5.00
Midget Model.....	2.50
Ford Model.....	2.75

The standard model is also made at the same price in a special construction to fit the Packard car, but is not made in the other sizes. The standard, Junior and Midget models are also made in special construction for Willys and Overland cars.—Moto Meter Co., Inc., Long Island City, N. Y.



Boyce Moto Meter



Moore's Mud-Hole Skid

## MOORE'S MUD-HOLE SKID

This device for getting traction in mud holes consists of a board with chains attached to one end, the chains being hooked together through the lower spokes of the rear wheel and the other end of the board being started under the front of the wheel.

When the wheel turns, the chains pull the board under the wheel and the wheel climbs up the board. Made in four sizes, for Fords, \$7.50 per pair, other passenger cars \$10. ½-ton trucks \$25. 3½-7-ton trucks \$30.—Langley & Schultze, 426 So. Third St., Louisville, Ky.

## Cars and Trucks Need Air Cleaning Devices

**They Would Greatly Increase Life of  
Engines—"Reworked Petroleum"  
a New Fuel**

CHICAGO, Nov. 9—Passenger cars could be run 50,000 miles without ever taking up a bearing and truck engines would require much less repairing and would last much longer if they were equipped with good air cleaners. This statement was one of two features of the discussion of a paper on "Lubrication and Fuel Tests on the Buda Tractor-Type Engine" presented by P. J. Dasey, sales and research engineer of the Buda company, to the season's first monthly meeting of the Mid-West Section of the Society of Automotive Engineers last night.

Another feature that made the engineers and dealers at the meeting sit up and take notice was Dasey's suggestion that there probably would be commercially available in a short time a new fuel—a reworked petroleum product—which would cost much less than gasoline but which, except for ease of starting and for extremely high-speed engines, has as good power and fuel economy characteristics as gasoline.

This product Dasey calls synthetic crude, and his paper was devoted chiefly to reports of careful tests in the Buda laboratories of this fuel in comparison with four other fuels, namely, gasoline, cracked benzine, cracked gasoline and kerosene. These tests were made on the new Buda tractor engine model HTU, using a standard Stromberg carburetor.

Summarizing the tests on these fuels and averaging the results of five runs on each fuel for power and economy at different speeds, he found the following in brake horsepower-hours per gallon:

B.H.P.-Hr.  
per Gal.

Commercial gasoline .....	7.80
Cracked gasoline .....	7.92
Synthetic crude .....	8.02
Cracked benzine .....	8.23

The crying need for air cleaners, not only on tractors but on trucks as well, was emphasized. Dasey stated that the Buda factory service men were required to send in samples of the crankcase oil every time they went out on a case of engine trouble. This oil was tested, and in practically every instance of piston scoring, bearing wear and similar troubles, the oil was found highly charged with dirt. It is his belief that the greatest immediate need of the truck field is the universal adoption of some efficient form of air cleaner.

**Back to Business—Let's Start Right**

### Campaign to Save Oil

WASHINGTON, Nov. 8—A campaign to save oil has been inaugurated by the United States Fuel Administration calling attention to the oil that is wasted by leakage. The campaign was started by mailing thousands of letters to oil pro-

ducers and consumers. Following is the statement:

Dear Sir, "Save Oil":

A recent inspection conducted by one of the largest railway systems in this country developed that 25 per cent of all barrels containing oil were leaking, many of them wasting large quantities. It is not the waste of this oil alone but there are thousands of dollars of damage done to foodstuffs and other merchandise caused by these leaking barrels. Leakage of this nature, occurring on all railroads handling barreled oil shipments throughout the United States, results in thousands of gallons of oil being daily wasted.

The conservation of oil is a war necessity and is therefore of great importance. I trust that you will give due consideration to every possible way by which your cooperation can be put in the very best condition and thus reduce the leakage loss to the minimum. It has been noted that second-hand wooden barrels are, in some cases, being used after being repainted without being given the necessary attention of recoopering and that iron and steel barrels are not being properly sealed.

I earnestly hope you will give your wholehearted co-operation in this matter and in every way endeavor to "stop the leaks and save the drops." United States Fuel Administration, Oil Division, W. Champlin Robinson, Director of Oil Conservation.

**Back to Business—Let's Start Right**

### Implement Dealers Gathering

OMAHA, Nov. 12—Dealers are coming in early for the Tenth Annual Convention of the Mid-West Implement Dealers' Association. The convention will open officially at 9 o'clock to-morrow morning. Owing to conditions in this territory past and present a record-breaking attendance is anticipated. An interesting program on a line with resumption of industrial activity has been prepared. Tractors will occupy a prominent place on the program but will be handled through the question box rather than by direct addresses.

A large and representative display of farm operative implement and tractors is being installed in the Municipal Auditorium and will be a big feature of the convention. Included in this exhibit are tractors of the following makes:

Nilson, Allis-Chalmers, International, Moline, Wallis, Emerson-Brantingham, Avery, Appleton, Bull, Wisconsin, Cleveland, Parrett, Case, Huber, Advance-Rumely, Hart-Parr, Turner, Townsend and others. The implement display covers most of the well-known makers of farm equipment. The motor car interests of Omaha are well represented in the tractor display as tractors are shown by the J. T. Stewart Motor Co., Noyes-Killy Motor Co., Jones-Opper Co., Nebraska White Co. and the Hanson-Tyler Auto Co.

*Back to Business  
And Start Right*

## 11,388 Farm Tractors Now Ready To Be Sold

**That Number In Hands of Makers,  
In Transit or With Dealers—  
50,000 Sold Last Year**

WASHINGTON, Nov. 11—Eleven thousand three hundred and eighty-eight tractors were in the hands of manufacturers, in transit or in the hands of dealers in August, 1918, according to a report just filed by the office of Farm Equipment, United States Department of Agriculture, following an investigation of the tractor situation in this country.

Investigation was for the purpose of securing accurate information to facilitate adequate and equitable distribution of farm tractors throughout the country. In connection with the inquiry a report was received from every tractor maker in the country concerning tractors manufactured and their distribution between Jan. 1, 1916, and July 1, 1918. Following is the summary of the compilation of the replies:

### NUMBER OF TRACTORS MANU- FACTURED

1916 .....	29,670
1917 .....	62,742
January 1 to June 30, 1918.....	58,543

Total for 1916, 1917, and first half of 1918 .....

### NUMBER OF TRACTORS SOLD To Users

1916 .....	27,819
1917 .....	49,504

### To Exporters

1917 .....	14,854
1918, first 6 months.....	15,610
Number of tractors on hand, in transit or in hands of dealers at time of report—(August, 1918).....	11,388

**Back to Business—Let's Start Right**

### Tractors on Wisconsin Farms

MILWAUKEE, Nov. 11—The tractor was used on one out of every 44 farms of 100 or more acres in Wisconsin during the past year, according to figures compiled by the College of Agriculture, University of Wisconsin. The college credits the tractor with much of the \$300,000 increase in the agricultural production of the State during the period. To supply operators for these tractors and the many new machines which are being purchased at this time and next spring, the college will give two courses in tractor and gas engine operation and maintenance. The first course starts Dec. 2. It is open to persons over 16 years of age, but the class will be limited to 50.

**Back to Business—Let's Start Right**

### Dealer Has Transportation Show

NEW YORK, Nov. 12—The Colt-Stratton Co., which, as stated in Motor World last week, postponed its Motor Transportation Conference, will hold it next week, beginning Saturday, Nov. 16. Various men of prominence in transportation and Governmental activities will speak.

OMAHA, NEB., Nov. 11—Dealers at the annual meeting of the Omaha Automobile Trade Association showed a remarkable spirit of optimism considering the hard row which the automotive trades have had to hoe during the past few months. It developed that the practice has become virtually universal in this section to meet the crimp in passenger car trade by enlarging the scope of business with the taking on of trucks, tractors and automobile supplies and accessories.

Powell, one of the pioneer automobile dealers in Omaha and now a veteran supply and accessory dealer, expressed the conviction that one result of the situation will be that after the war auto-

## Accessory Trade Is Coming to Garagemen

**Powell, of Omaha, Says War Has Proved Benefit to Garages and Advantage Should Be Followed Up**

mobile dealers and garage owners will have absorbed largely the sale of accessories and supplies. This is not true as yet in this territory, this trade having fallen largely to hardware stores, department stores and the like. Powell declared his belief that with the new order arising from the present situation the

industry will be materially helped. The benefit is already apparent in Omaha, it was emphatically stated.

The presence of virtually every member of the Association was a feature of the meeting. Election of directors was the chief order of business. J. T. Stewart, 2nd, was elected president; Guy L. Smith, vice-president. Clarke G. Powell succeeded himself as secretary-treasurer. The other members of the board are Lee Huff and J. M. Oppen.

A stockholders' meeting following the election of officers took up the matter of the annual automobile show, and in line with the action of the National Automobile Chamber of Commerce it was decided that no show will be held in 1919.

Back to Business—Let's Start Right

## Keep Down Tractor Selling Costs

(Continued from page 15)

theory work out in practice no tractor salesman is employed who has not demonstrated his ability to take care of any trouble which arises which it is within the ability of an ordinary dealer to remedy.

Manager Smith says, too, that the motor car repairmen whom the firm can employ do not like to work on tractors, so, when a tractor reaches the stage where it requires a complete overhauling the owner is referred to some machine shop or well equipped garage where there are lathes, cranes and other appliances for handling such work.

### Service Strictly Understood

Regarding service, Manager Smith says: "Before closing a tractor sale we have a distinct understanding as to how much service our customers may expect without charge. We make it a rule to send an experienced operator to instruct a buyer on the first day's use of the tractor. It is his duty not only to show the farmer how to operate the tractor, but also to instruct him as to its proper lubrication, how to adjust the bearings and to care for the machine in general. This is all the service we agree to give the customer unless there is something mechanically wrong with some part of the tractor, and each case of this kind has to be handled individually.

Sometimes we furnish this service gratis, but where we do some adjusting on other parts of the tractor at the same time we charge for that part of the service. In other cases, as a matter of policy, where a customer does not grasp a good working knowledge of the tractor from his first lesson, we sometimes visit him two or three times without charge, but he does not know it at the time and expects to have to pay for it. If we did not do this some buyers would be calling on us every time some trifling thing got out of adjustment, but when they think it will cost them something they usually exhaust their own efforts first,

and by so doing are able to overcome a lot of seemingly insurmountable difficulties, and this makes them better operators.

In these cases, where it is wholly the fault of the operator, *we make a charge of 15 cents per mile traveled and 60 cents per hour for labor*, and we can assure you that we do not have anywhere near the calls for assistance that we had before we installed this system."

Manager Smith says it is difficult to estimate accurately the cost of service per tractor. He says that when the trade was younger and commissions were lower, a good many dealers habitually gave service in excess of the commission. He pleads guilty to having done the same thing himself. Conditions as respects commissions are improving now, however, he says, and the amount of service required on a majority of the tractors

sold these days is not as great as it used to be, largely because there is a better understanding of the tractor by the farmers in general than once was the case.

*This has enabled the firm to cut its free tractor service cost to approximately \$25 per machine.* Smith says this estimate may be a little high on the average, but the amount of service varies so much that it is impossible to say exactly what it costs. The firm figures this amount, therefore, as the part of the overhead which must be carried by every tractor sold.

At all times a stock of repairs, which includes all the more important parts for the tractors sold, is carried. The size of the stock is determined upon the number of machines in the hands of the farmers, the idea being that it always shall be ample for ordinary and emergency needs.

Back to Business—Let's Start Right

### Studebaker Branch Quits

DES MOINES, Nov. 11—The Des Moines branch of the Studebaker Corporation has discontinued business for the duration of the war. H. J. Brechtel, manager, goes to Kansas City in the capacity of the branch there. Walter J. McGraw, assistant manager and office manager, will serve in the same capacity at the branch in Boston. The DeBrown Motor Sales Co. will continue as the local representative in Des Moines.

Back to Business—Let's Start Right

### Greer's College Endorsed by Dealers

CHICAGO, Nov. 11—The Greer College of Automobile, Tractor and Aeroplane Engineering, formerly the Greer College of Motoring, has been endorsed by the Chicago Automobile Trade Association as a school for training its mechanics and also owner-drivers and chauffeurs.

This was brought about by the recommendation of the War Economy Board that dealers in cities should establish classes or encourage schools for the purpose of educating mechanics, drivers, etc., in view of the shortage of competent mechanics.

### Pick Men With Money

First, learn if your prospect can afford to buy a plant. If he hasn't any money or prospects, you're wasting time.—Fred L. Tubbs, vice-president, Alamo Farm Light Co., Omaha.

### Satisfy the Customer

We hire our salesmen on straight salary and don't give them any big commissions to tempt them to sell a plant just to get the money. We insist on satisfying the customer.—Fairbanks, Morse & Co., Denver branch.

## Montreal Will Hold Show in the Spring

**Will Display and Sell Used Cars,  
Trucks and Tractors—Kirby  
to Manage the Affair**

MONTREAL, Nov. 7—Arrangements have now been concluded whereby Montreal will have a big exhibition of used passenger cars, trucks and motorcycles. A large building with 25,000 sq. ft. of floor has been obtained in the center of the city, and the dates of the big show are fixed for April 5 to 12.

When it is realized that there will be a very small supply of new cars next season owing to the factories all being engaged on war work, it is very easy to see that there will be a tremendous demand for serviceable used automobiles. And to supply the demand for these cars this exhibition has been arranged. No older make of car than 1916 will be admitted, and it is proposed to have a prominent city auctioneer hold an auction sale of the cars on the floor every evening at 9 o'clock.

A special feature will be rebuilt cars or, in other words, used cars that have been taken to pieces and rebuilt, thus carrying practically the same guarantee from the builder as new cars have from the manufacturers. There will positively be no new cars shown. Several makes of tractors will be on view, and there will also be a special accessory section.

Tenders are being called for an elaborate patriotic decorating scheme, and many startling features will be arranged on each individual day. The sales will be on a percentage basis and the entire undertaking will be held in aid of the funds of the Montreal Soldiers' Wives' League.

Thomas C. Kirby, Windsor Hotel, secretary of various trade activities, will be the manager.

**Back to Business—Let's Start Right**

### Boston Show Out of Question

BOSTON, MASS., Nov. 11—If the Boston Automobile Dealers' Association decided to hold a motor show next Spring its plans would have to be altered now, for the officials of Tufts College have taken over Mechanics' building as a barracks for the students who are training in its officers' unit. And this unit will be held at the college during the regular college season so that the barracks being part of the Government scheme of training any lease of the building for motor show purposes would have little consideration. As there is no other building in Boston suitable for a show it would not be possible now to have one.

**Back to Business—Let's Start Right**

### Let Bodies Into Canada

OTTAWA, ONT., Nov. 11—The War Trade Board announces a new ruling in

regard to import licenses for automobile bodies and chassis. It will be remembered that by order-in-council of June 3 the importation of automobiles valued at \$1,200 and upwards at place of manufacture was prohibited except under license by the War Trade Board. A memorandum of the department issued Sept. 17 declared that this prohibition also applied to the body and chassis of automobiles when the body or chassis together with the usual parts required to complete the automobile amounted to \$1,200 or upwards, f.o.b. at place of export. Regarding these restrictions on the importation of automobiles, bodies and chassis, the War Trade Board has decided that where an automobile is for use on a chassis imported into Canada prior to June 16, 1918, upon proper evidence being submitted of the facts, license for importation will be recommended. Furthermore, the War Trade Board will be disposed to recommend import license for bodies or other parts of cars not obtainable in Canada which are an essential requirement for the production of automobiles by bona-fide manufacturers of automobiles in Canada.

**Back to Business—Let's Start Right**

## May Eliminate Tax on Cars For Export

NEW YORK, Nov. 9—It seems likely that the war revenue tax imposed on cars for export will be eliminated. Under the terms of an amendment which has been proposed as an addition to the war revenue measure now in the hands of the Senate and the House of Representatives, it is stated that vehicles sold or leased for export shall not be taxed.

Despite the fact that the Constitution specifically states that there shall be no tax on exports, the Treasury Department has ruled that cars and trucks sold for export are taxable under the provisions of the present War Revenue measure which provides an impost of 3 per cent. The Treasury Department has ruled that such a tax must be paid when cars or trucks are exported in any one of four ways which have been previously outlined in Motor World.

The National Automobile Chamber of Commerce has repeatedly pointed out the unconstitutionality of such a ruling and has urged that the tax on vehicles exported be eliminated. It seems likely now that this will be done. Under the terms of the new War Revenue Bill in the House vehicles are taxed 10 per cent and in the bill in the hands of the Senate the tax is 5 per cent. Following is the text of the proposed amendment:

Under such rules and regulations as the commissioner, with the approval of the secretary, may prescribe, a tax imposed under this title shall not apply in any respect to articles sold or leased for export, and in due course so exported.

**Back to Business** ☐

☐ **And Start Right**

## "Cash" Bars Trouble Selling Farm Tractors

**Some Dealers Insist on Payments  
for Demonstrations—A Typical  
Agreement**

LOS ANGELES, Nov. 11—While many car and truck dealers in southern California have more or less trouble in financing deals because of deferred payments, the tractor dealer's pathway apparently is free from rough spots. The reason is found in the fact that tractor dealers are operating on the cash principle. They insist upon getting the money upon delivery of the machine, and all indications are to the effect that they are succeeding.

The Federal Reserve banks will loan money to ranchers at 6 per cent for the purchase of tractors. The dealers insist upon 8 and 10 per cent on deferred payments, so it is more economical for ranchers to borrow from the Federal Reserve and pay cash than it is to issue notes to the dealers. Naturally there is no objection on the part of dealers.

Some of the tractor men insist upon receiving a deposit before they will make a demonstration. It is understood that if the tractor makes a satisfactory showing the balance will be paid immediately. If the tractor should fail the deposit is returned.

One dealer does not demand any deposit previous to the demonstration, but after the work has been done to the satisfaction of the prospect he must pay in full or the tractor is taken back to the store. This dealer is the oldest in California, having been identified with tractors for fourteen years. He says that during that time he has sold only two machines on which he accepted notes. Both of these had been used before and were sold as second-hand.

The following is a sample of the sales agreement used by one dealer:

Los Angeles, Calif., \_\_\_\_\_, 1918

RUDDLE & MENNILLO,  
231-233 North Los Angeles St.,  
Los Angeles, Calif.

Gentlemen:

Accept my order for the following described Fageol Tractor, to be delivered to me on or about \_\_\_\_\_.

we  
For which (I) agree to pay the sum of \$1550.00, f.o.b. Los Angeles, as follows: \_\_\_\_\_ on the signing of this agreement and the balance of \_\_\_\_\_ on delivery of the tractor.

Purchaser.

We accept the above specifications, and acknowledge receipt of \_\_\_\_\_ deposit. We are not responsible for delays in delivery through fire, theft, wrecks, accidents or other conditions beyond our control.

Should there be a raise in the factory price of the tractor it is optional to the purchaser to accept delivery or the return of the deposit.

RUDDLE & MENNILLO,

Seller.



This agreement not binding unless approved by H. Jack Ruddle.

This agreement is also subject to the following arrangement, viz: If, on a demonstration being made, Mr. \_\_\_\_\_ decides that the Fageol is not suitable to work on his ranch, then RUDDLE & MENNILLO agree to refund the \$\_\_\_\_\_ option.

#### Back to Business—Let's Start Right

##### Rural Express in Montreal

MONTREAL, Nov. 11—Arrangements are going ahead whereby the return load system is being got into tangible shape. Already arrangements are being made for a service between Montreal and Schenectady, taking in the entire route between these two points. It is also being arranged to put on a regular service between Montreal, Three Rivers and Quebec, in addition to a constant daily service around the entire island of Montreal.

The importance of the development of the rural express and return load system is at last being grasped by the manufacturers, retail men and farmers, and the system will also enable the farmer without effort on his part to market his produce much more cheaply than in the past. It is hoped within the very near future that a network of trucks collecting and delivering will be installed all over the Province of Quebec, with Montreal as the center distributing point.

T. C. Kirby, secretary of trade activities, is devoting a large amount of time toward bringing the return load and rural express system to the front.

#### Back to Business—Let's Start Right

##### Canadian Ford Prospers

DETROIT, Nov. 11—Although the Ford Motor Co. of Canada made only 46,914 cars during the fiscal year ending July 31, 1918, 3913 less than 1917, the company's gross business amounted to \$24,680,442, an increase of approximately \$800,000. This was due principally to an increase in the price of passenger cars put in effect during the year. Net profits for the year were \$2,358,192.84. The surplus was \$4,856,049, or nearly \$2,500,000 more than last year. Resources amounted to \$14,281,808, an increase of about one-seventh. No change in capital stock was made during the year. The directors elected are Henry Ford, James Couzens, Gordon M. McGregor, Frank L. Klingensmith and W. R. Campbell.

## Back to Business— And Start Right

## Does It Pay to Exhibit at Fairs?

### What One Eastern Distributer Has Found Out on This Subject—It Does If You Do It Right

THE question of whether or not the dealer and distributor ever receive direct returns from exhibits placed at State and county fairs has always been a much mooted one, not only among tractor and motor car dealers, but among farm implement men of all types. All acknowledge that as a "glad hand" proposition it is a good thing; it gives the farmer a chance to look over the various machines practically on his own ground, and eventually might lead to a few sales, but by a great number these events are considered more in the light of a necessary evil than as a real building proposition.

It was in this state of mind that T. J. Northway, of Rochester, N. Y., found himself when he received an invitation from the State Bureau of Food Production to exhibit his tractor at the New York State Fair at Syracuse. It was Northway's idea, however, that any good idea could be made to pay if handled correctly, and accordingly he set to work to make his exhibit at the State Fair a success from every angle.

Northway has the advantage of having a live-wire, high-tension salesman in charge of his tractor department, in the person of E. Gordon Lee, and together the two set to work to outline a plan that would accomplish the desired results. It was decided that in order to secure lasting results, which would be productive of future as well as immediate sales, the exhibit at the fair must be made the center of interest at all times. With this result in mind they set to work.

Letters were written to every Fordson dealer in the state, and to each individual owner, inviting them to visit the State Fair, and to make the Northway tent their headquarters while there. Each was invited to bring his friends and the slogan: "Meet me at the Northway tent" was inculcated into each individual letter. Both dealers and owners were encouraged to ask all the questions they desired and to register any complaints against the tractor and its accompanying implements that they desired. To this end arrangements were made for the presence of a representative from both the Oliver Plow Co. and the Roderick Lean Co.

Plenty of chairs and benches were provided at the exhibit, the expense of which was shared between Northway and the firm of Wilson & Green, of Syracuse, local agents for the tractor, and two carloads of tractors—nine in all—were delivered on the ground. Eight of these were the standard machine, just as it was shipped from the factory, while the ninth had been decorated in red, white and blue as an exhibition machine.

The result of this thorough prepara-

tion was exactly what was desired, and the tent was filled to overflowing each of the four days of the fair, although it rained nearly every day.

Having succeeded in drawing the crowd, the next step was to turn their presence to advantage. The plot of ground set aside for the tractor demonstration at the State Fair was outside of the fair grounds proper, and about 55 acres in size. This gave Northway and Lee the opportunity to test out a conclusion they had arrived at through their experiences at various tractor demonstrations throughout the year, held under the auspices of the State Food Commission.

It has been found that through the extensive publicity and word-of-mouth advertising that has been given tractors in general, farmers as a rule are prone to expect too much from the machines. Coming direct to the demonstration with a number of false impressions regarding the work that the machines would perform, a number of men were certain to be disappointed after seeing the tractor in operation. Lee therefore undertook to prepare the way for the demonstration by concise explanations of what the small tractor in general could be expected to accomplish. The sign,

"BUY SOME KIND OF A TRACTOR,"

was prominently displayed in the Fordson tent.

As fast as the little groups gathered in the tent, Lee would explain the tractor to them. Then, as the idea was a Ford feature throughout, the visitors were conveyed to the demonstration in Ford coupes.

Perhaps there has been no tractor demonstration conducted at any place this year where such conditions confronted exhibitors as at the New York State Fair. Part of the ground that was to be fitted had previously been the bed of the old race track, and was as hard as a city pavement. It was a foregone conclusion that this part of the ground would give the machines some trouble, and that fault was certain to be found by some of the farmers with the way the machines acted under these conditions. Coming to the field with their minds prepared for a demonstration under abnormal conditions however, but a few comments of a derogatory nature were heard from the prospects. As a matter of fact an excellent seed-bed was prepared by all exhibitors.

The disadvantage of exhibiting under these conditions did one thing, it settled once and for all the old argument:

"Well, it works all right here, but I'd like to see it work on my ground."

It was found that the merely curious crowd followed the "stunt" tractors, but that the really interested prospects followed the operations of the machine which had been thoroughly explained to them. They then returned to the tent, paid their deposit, and the deal was closed. The first nine tractors were sold out during the first day, and as it was impossible to get more machines to the ground it was found necessary to start a roll of

honor, upon which was placed each day a neatly painted placard bearing the names of the men who had purchased tractors.

The heading at the top of the roll of honor indicated that the purchasers had agreed to increase the war-time production of food by the use of the tractor. This compliment to the farmer is one of the little steps in sales psychology that are keeping the farmer's dollars rolling into the Northway cash register, since there are few agriculturists who do not like to brag that they bought their tractor at the State Fair.

Thirty-eight machines were sold during the four days, in spite of the fact that it rained every day, keeping thousands away who otherwise would have attended. These sales were distributed about the state in such a manner that dealers in nearly every section derived some benefit. Incidentally, several of these sales were made at the psychological moment to brace up dealers situated in unfavorable sections, who had lost some of the pep that characterized the distribution of the first 1000 Fordsons on a no-profit basis.

In addition to the actual sales, thousands of prospects were created, since many of the visitors knew the men whose names appeared on the roll of honor, and promised to purchase tractors providing their neighbors were satisfied with their bargain.

Northway's idea of having representatives of the implement companies on the ground was also productive of fruit, since it aided in doing the one thing that is just as essential in any business as the actual making of the sale—keeping the prospect sold. One dissatisfied user can create actual harm, while a dozen lost prospects only mean harder work, and for this reason it is essential that the greatest of care be used in handling the complaints which are certain to arise.

H. G. Moyer, representing the Roderick Lean Co., and V. H. Putnam, representing the Oliver Plow Co., did a world of good by explaining to farmers who already had purchased tractors just how to adjust these implements to secure the best results. The fine points of the tractor itself were explained by Lee.

Not only was the exhibit productive of results from the points of actual sales and the creation of prospects, but it also acted as a sort of a miniature sales convention, and the interchange of ideas that took place between dealers may eventually prove to be have been the most outstanding feature of all. As the actual sales at the demonstration were made by Lee, the dealers had the benefit of watching motor car merchandising methods actually applied to tractor sales, and to witness Lee's idea of the way to close with a prospect. They carried home with them an enthusiasm that is best evidenced by the carload orders for tractors which they have poured in since the fair.

Some splendid concrete illustrations of the part which the tractor is playing in food production in New York State were brought out in the conversations of these dealers. One man told of an eleven-year-

## Take Industry 9 Months To Get In Production

### Reeves Estimates Time Required to Get Back on Normal Basis—Bond Issues Win

NEW YORK, Nov. 8—It will take the motor car manufacturers as a whole about nine months to get back to 100 per cent production, stated Manager Alfred Reeves, of the National Automobile Chamber of Commerce, to-day. Getting out of the war will be almost as big a job as getting in.

Factories now, he said, have not stocks sufficient for production and would have to acquire new stocks before production could assume any great proportions. The return to normal would be gradual. The factories, which now are at 50 per cent or less, would come back by degrees and would hit first 50 per cent, then 75 per cent and then 100 per cent. This means that before-the-war production cannot be expected much before next September.

Schwab is said to be turning back 30 per cent of his ship steel, which he is unable to use because of the status of the shipyards, due to various causes.

Steel, Reeves believes, will be rationed for some time during the beginning of the peace period.

Many of the manufacturers have, during the lull in normal manufacture, been experimenting with new engineering and body designs, and, while before-the-war models might come through in a few months, the new designs could not be

old boy, Meredith Castor, of Baldwinsville, who had plowed 19 acres in three days; another of a twelve-year-old lad who had disked 25 acres in one day, and still another of a man over eighty years of age who had learned to run and operate his tractor. Methods of overcoming the pat arguments of the farmer were given, and general sales methods discussed.

To sum up briefly, Northway convinced himself that the exhibit at the State Fair was a money-maker in more ways than one, and has since backed his findings by placing an exhibit at every county fair in western New York.

In a nutshell, his idea of the way such propositions should be handled is to first insure the presence of a crowd, either through advertising or a direct invitation to the individual, and to see that this crowd centers about his exhibit. This accomplished, it is a matter of salesmanship to produce results. The larger the crowd the greater number of tractor prospects it is certain to contain, and the greater the general results. A plain statement of facts and an elimination from the farmer's mind of the idea that the tractor will do everything, under all conditions, can generally be relied upon to produce sales in such a crowd.

expected in quantity before the end of next summer.

At a meeting of the Chamber directors yesterday statistics produced showed the industry to have shipped on a 48 per cent basis in September and on 40 per cent or less during October.

In September the carloads shipped were: 1917, 20,538; 1918, 9900. October: 1917, 21,403; 1918 (incomplete figures), 8000.

Roy Chapin reported that at the elections the road bonds of Pennsylvania for \$50,000,000 and of Illinois for \$60,000,000 were carried, to pull both States "out of the mud."

It was coincidental that the day war was declared the Chamber was in session, and wired the Government an offer of co-operation for war work. Yesterday while the Chamber was meeting the United Press report of peace came, which later proved to be unconfirmed, and the Chamber at once wired an offer of its services for reconstruction.

Manager Reeves, who has maintained his home in Yonkers, N. Y., just outside New York City, and a war residence in Washington, has removed his family to the Capital, and will reside there permanently until developments warrant his return.

Reeves expressed gratification at the co-operation effected a few days ago in Washington when representatives of the car makers, parts makers, jobbers and dealers entered into a joint session on war problems.

### Back to Business—Let's Start Right

#### New Distributer for Turner Tractors

CHICAGO, Nov. 7—The Turner Mfg. Co., Port Washington, Wis., has appointed the Owen Magneto Corp. distributor for northern Illinois and northern Indiana and the western half of Michigan for the Simplicity tractor. The Owen Magneto Corp. is distributor for Peerless cars and trucks and Deering magnetic and Rauch-Lang electric cars.

### Back to Business—Let's Start Right

#### Marmon Champion Liberty Producer

DETROIT, Nov. 9—Nordyke & Marmon Co., Indianapolis, wins the championship banner in the first monthly competition between the five firms building Liberty engines. Though the Indianapolis company produced the smallest number of engines, its quota for October was exceeded by 246.4 per cent. General Motors was second, with shipments totaling 171.7 per cent of its quota. Lincoln Motor Co., Detroit, was third, with 127.3 per cent, followed by the Ford Motor Co., with 117.7 per cent, and the Packard Motor Car Co., with 109.5 per cent. Detroit factories lead in quantity production, Ford delivering 1059 engines, Lincoln 1050 and Packard 903. Cadillac and Buick, of the General Motors Co., turned out 558 engines. October production was almost double that of September. November quotas have been considerably increased over those for October.

## Have Contract That Buyer Pays the Tax

**If You Don't Watch Out, Says Vesper, You May Find Yourself Holding the Floor Tax Bill**

ST. LOUIS, Nov. 11—In a special edition of the N. A. D. A. Members Bulletin, now being distributed, there are some interesting facts about selling cars on partial payments. It warns all dealers making sale contracts to have the contract, whether cash or on payment, state clearly that all taxes now or hereafter levied are to be paid by the buyer.

It has been learned by the N. A. D. A. that a great many of the time-payment contracts issued do not contain such clauses, which leaves the seller—if by terms of the contract he holds the nominal title to the machine—responsible for the floor tax soon to be levied. The Bulletin says:

An interpretation has been established to the effect that on conditional sales made under the installment or lease plan of contract, in which title to the car does not pass, that the holder of title is responsible for floor tax. It was supposed that all dealers had protected themselves against the possibility of such a tax by having inserted in their sales contract or order blank a provision whereby the purchaser is liable for any Federal tax that might have been or would be levied, as ample warning was given through the trade press, etc., prior to the passage of the first revenue bill in 1917. In most cases this protection prevailed, but it seems that in some localities some of the dealers failed so to guard their sales, and the consequence is that they very probably will be liable for the payment of some such tax in the event that it may be levied.

The matter was taken up with the Commissioner of Internal Revenue, and it was found that the ruling was that the floor tax of 1½ per cent applied to such automobiles excepting those delivered prior to May 9, 1917, although the sale was not consummated by the passing of title until after the passage of the act.

Claim may be entered for refund if circumstances justify, and it will be given consideration, but before any refund can be claimed upon any tax that has been paid under this ruling, the matter must be taken up with a Revenue Collector in the District and claim be made for refund; payment of such tax should be made under protest so that the matter may be actually ruled upon its merits by the Department.

In an effort to have this matter corrected in the new revenue bill, steps were immediately taken to bring it before the Senate Finance Committee, which was done in a brief presented at the same time as the one pertaining to repair parts, and the claims made for same were practically as follows:

"In connection with that portion of the revenue bill now under consideration which proposes to impose a war tax on automobiles sold on conditional sales contract, upon which the dealer retains title, we wish to call the attention of the Finance Committee to the extra burden it imposes upon the dealer, who merely retains the title to the vehicle as security for payment.

"This clause principally affects the dealers in commercial vehicles. Previous to the war the truck and commercial vehicle business was conducted practically on a cash basis, but now is largely conducted on the installment, or lease, plan. This condition has been brought about, in large measure, by the development of rural express routes, such as suggested by the Council of National Defense.

"The campaign conducted by the Transport Bureau and the co-operation of the automobile dealer in response to the appeal of this agency of the Government, has greatly increased the selling of trucks, and to-day a large proportion of the truck sales are made upon the conditional payment plan. This has enabled companies and individuals to establish rural express routes for the purpose of relieving short haul freight traffic in the cen-

ters of production and for the transportation of raw materials from the source of production to the manufacturing centers.

"This has resulted in relief to the railroads, and if the selling of cars on the conditional sales plan is to result in a tax on the dealer it will become necessary to return to a cash basis, which no doubt will have a curtailing effect on these activities, as well as upon the industry.

"Passenger cars will be affected in the same way, for sales upon the conditional sales contract plan have increased as the utilitarian purpose of the passenger car has developed, and especially in localities where the business has grown rapidly on account of necessity for transportation facilities, and particularly so in the West.

"A provision that will place the tax upon the purchaser under a conditional sales contract, the same as when purchased for cash, will bring about the necessary relief and achieve the result. The requirement that the tax be collected at the time of delivery of the car, or upon the payment of the first installment, would solve the problem and place both the cash sale and the deferred payment sale upon the same basis."

**BE SURE THAT ALL SALES CONTRACTS, WHETHER CASH OR ON PAYMENT—NO MATTER WHAT PLAN—STATE PLAINLY THAT ALL TAXES NOW OR HEREFTER LEVIED ARE TO BE PAID BY THE BUYER.**

**Back to Business—Let's Start Right**

### Motor Transport Corps Organized

WASHINGTON, Nov. 9—The Motor Transport Corps under Brig. Gen. C. B. Drake, which has charge of engineering, operation and maintenance of the motor vehicles of the Army excepting tanks and tractors, has completed its organization. General Drake is at the head with Col. James W. Furlow as Deputy Chief, supervising the executive, maintenance, engineering and liaison divisions. Lt. Col. B. F. Miller is the assistant deputy supervising property and operating divisions. Lt. Col. Edward Orton, Jr., is in charge of the service division.

Col. A. O. Seaman of the General Staff is in charge of the executive division, controlling administration, personnel, training, distribution of vehicles, and requisitions and orders to purchase. Col. W. H. Noble heads the property division, John Younger the engineering division and Lt. Col. W. D. Uhler the operating division. George E. Randles who was formerly with the Foote, Burte Co. of Cleveland and who had charge of maintenance under Christian Girl, is in charge of the maintenance division controlling the advisory and planning, base and field shops, spare parts and accessories, machinery and tools, crating, motor transport depots and the salvage and engineering. General Drake, Col. Furlow, Lt. Col. Orton, Lt. Col. Uhler and General Randles were associated with the original Motor Section under C. D. Baker and Christian Girl.

**Back to Business—Let's Start Right**

### The "Flu" Hits St. Lou

ST. LOUIS, Nov. 11—Saturday morning there became effective a drastic influenza ban in this city. All non-essential business was included, including salesrooms and tractor and truck agencies, except where Government business was being handled. Among the stores that were named essentials were accessory stores and repairshops.

## Vesper and Peake to Speak Through South

**Will Make Tour This Month—Big Membership Increase Expected**

ATLANTA, Nov. 11—Arrangements have been completed for a speaking tour through the South for President F. W. A. Vesper and Executive Secretary E. E. Peake of the National Automobile Dealers' Association.

Until now the association activities in this section have been mostly on the part of distributors, who have taken the matter up with their dealers, and no general plan of campaign has been instituted. It is felt, however, that with the beginning of the reconstruction period the time is fitting for a general trade revival in this section.

George D. McCutcheon, a director of the N. A. D. A. and manager of the Buick branch here, has been in charge of the arrangements in this section. The first meeting will be in Charlotte, N. C., Nov. 19, where John Madden, president of the Charlotte association, is inviting all the dealers of the Carolinas and part of Virginia to the affair.

The following day, Nov. 20, a meeting will be called at 10 a. m. in the assembly hall of the Atlanta Chamber of Commerce. The session will be attended by dealers from Georgia, Alabama and eastern Tennessee. In addition to the talks by Vesper and Peake, dealers will discuss business problems, and a large amount of general trade information of value at this time is expected to be disclosed.

Claude Nolan has arranged a meeting in Jacksonville for the following day, Nov. 21, which will be attended by dealers from Florida and southeastern Georgia.

Nov. 23 the dealers of Tennessee and southern Kentucky will meet at Nashville, where President W. Murray Hogan, of the Nashville association, is staging the event.

**Back to Business—Let's Start Right**

### Pooling of Motor Vehicle Equipment

WASHINGTON, Nov. 11—The pooling of the motor vehicle equipment of the Army under the control of the Motor Transport Corps has proven so successful in the District of Columbia, where it was first tried, as recently announced in Motor World, that the system will be extended throughout the United States. All passenger and cargo-carrying vehicles are included in the order, the effect of which will be to give a more efficient motor transportation service for the Army with a greatly reduced equipment. Heretofore motor vehicles have been assigned to the various departments for their exclusive use. Under the new plan they will be operated under one control and for the benefit of all departments.

## Harry Moock Wants You to Write Him

**He Is Ready to Make the N.A.D.A.  
Give You Service—What Service  
Do You Want?—Tell Him**

ST. LOUIS, Nov. 11—Harry Moock, formerly of Denver, is on the job as general manager of the N. A. D. A. at Grand Avenue and Lindell Boulevard. He arrived here Monday and departed at once for Milwaukee to see to the shipping of the records of the secretary's office from that city to St. Louis. He got back here Friday and is getting the trend of things. Motor World asked him what he wished to say to the motor dealers of the country. Here is his message:

"Any man ordinarily gets out of any organization merely what he puts into it. The N. A. D. A. members have been very fortunate so far in getting benefits because of the national questions in which the association has represented them.

"But now the field has been changed. The national questions are more or less settled and the association must stand on its own bottom.

"There is no doubt in the world that the association is needed and there is a great, big field for it. The question is merely wherein lies that field?

"How can the N. A. D. A. best serve the dealers of the country?

"Aside from the national problems, they probably cannot all be served on the same particular question.

"To serve this dealer, or that dealer, we must know his troubles.

"There is just one way to get this service to him, and that is for the dealer to state his needs.

"So the door is open. All bars are down. The man who wants service is urged to ask for it. The N. A. D. A. is at his disposal.

"We are going to get busy on the things we think are the major problems. Perhaps we are mistaken. The only way we can find out is for dealers to tell us."

Among his definite plans General Manager Moock is preparing for a regular and more frequent issue of the Members Bulletin. He is now working out plans to make each of these of permanent value as well as of transient interest. They will tell what is going on in the N. A. D. A., and they also will form, in time, a record of model laws, ordinances, contracts, etc.

"I have no illusions that I am going to make successful motor car dealers," said Moock, "but I hope to give to dealers some very excellent reasons why they should be more self-assertive, self-reliant, and why they should step into the leadership in their own communities, that is, if they are good dealers to start with.

"Any good dealer can have the help of the N. A. D. A. behind him if he starts a good move. But we cannot start these things that are up to the dealer."

Harry Moock, as most readers know, was secretary of the Rocky Mountain

Auto Trades Association. He did much work in that association that was of very great benefit to the dealers of that section of the country. He knows what is before him and is asking how he can help best. He wants letters from dealers.

**Back to Business—Let's Start Right**

**Joint Highway Meeting in Chicago**

WASHINGTON, Nov. 11—A joint meeting will be held in Chicago, Dec. 4, of the American Association of State Highway Officials and the Highway Industries Association. Highway and transportation experts will tell of the needs of road construction and of the value of the use of motor trucks for handling freight.

The feasibility of the bill introduced in the Senate by Senator Chamberlain and referred to the Committee on Military Affairs, which provides the appropriating of \$100,000,000 for the construction and maintenance of a system of national and State highways, designated to facilitate the movement of troops, equipment, munitions and supplies, will also be discussed at this meeting and plans made to assist in the enactment of it into a law.

This is the first concerted effort of these two bodies, and as there will be present from each State the highway commissioners, the men who really have great weight when it comes to enacting State highway regulations, the meeting should be fraught with much good.

**Back to Business—Let's Start Right**

**St. Louis Wants N. A. D. A. Meeting**

ST. LOUIS, Nov. 11—President Joseph A. Schlecht, of the St. Louis Automobile Manufacturers' and Dealers' Association, addressed a formal invitation Saturday to the N. A. D. A. directors, asking that the annual convention planned for January, 1919, be held in this city.

The correspondence of the directors last week indicated that they were entirely friendly toward St. Louis, but it developed that while it was known that local men wanted the convention, they had extended no formal invitation. A meeting of the directors of the local association was called, and President Vesper, of the N. A. D. A., was asked to state the prospects of the convention and outline its scope. As a result the formal invitation was issued. Plans will be made with a view that 300 members will be present, and a strong hope is entertained that more will come.

**Back to Business—Let's Start Right**

**Invading Boston's Sacred Common**

BOSTON, Nov. 9—According to plans now under way the sidewalk around Boston's most sacred and hallowed spot—the Common in the heart of the city—will be sliced off along two sides to provide a parking space for motor cars. The city is so congested with its narrow streets, and the motor cars have increased so rapidly, that there is no room for the vehicles.

## Turn On Your Lights; Fuel Heads Lift Ban

**Garages and Showrooms Can Be  
Lighted When Open for Business  
—New Rules**

WASHINGTON, Nov. 11—Garages, gasoline stations and all automotive dealers are again allowed to illuminate their stores or shop windows in New England, New York, Pennsylvania, New Jersey, Delaware, Maryland, District of Columbia, Michigan and Ohio, according to a ruling by the Fuel Administration.

Under the new order the store or shop window lighting is only restricted when the store is closed, and then only on the "lightless nights." Throughout the rest of the country lighting restrictions have relaxed to the extent that they are left to the discretion of the State Fuel Administrators.

The new order prohibits the use of light for illuminating advertisements, announcements or signs or for the external lighting of any building and for displaying a shop window when the shop is not opened for business, on Monday, Tuesday, Wednesday and Thursday of each week in New England, Maryland and the District of Columbia.

**Back to Business—Let's Start Right**

**Tractors at Georgia Fair**

MACON, GA., Nov. 11—Ten tractors will be demonstrated in connection with the Georgia State Fair, Tuesday and Wednesday, Nov. 19 and 20, being set aside for this purpose. It is expected that by the time the demonstration begins several more makes of tractors will be entered, so that residents of the State of Georgia and vicinity will be given a truly representative demonstration. The fair is under the auspices of the Georgia State Agricultural Society.

**Back to Business—Let's Start Right**

**Confusion Over War Revenue Bill**

NEW YORK, Nov. 11—Some slight confusion in dates exists in the new war revenue bill regarding the method of making returns of taxes on new cars, trucks and motorcycles, and the National Automobile Chamber of Commerce is endeavoring to have this removed. Under one section of the bill taxes must be returned on all vehicles sold subsequent to May 9, 1918, and under another the date is given as Sept. 3, 1918. The bill provides that where a manufacturer of vehicles or parts, or a distributor, has agreed to sell or lease vehicles or parts to the dealer, the dealer must reimburse the manufacturer or the distributor for any tax the latter may have to pay. Similarly, the ultimate purchaser must reimburse the dealer. The N. A. C. C. suggests that dealers insert in their contracts with purchasers a clause to the effect that any tax which may be levied is to be paid by the purchaser or the lessee.

## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

L. R. Wilson, formerly manager of the Omaha Automobile Supply Co., has taken the position of buyer with the Powell Supply Co., Omaha, and entered upon his duties Oct. 28.

Capt. James W. Gilson of Racine, formerly sales manager of the Mitchell-Lewis Motor Co., now the Mitchell Motors Co., and the Lewis Motor Car Co., Racine, has been promoted to major, according to word received from France. In 1916 he organized a battery of field artillery in Racine to go to the Mexican border, and a year later he formed a second unit in which he was placed in command as captain. Before his battery left Camp MacArthur, Tex., Captain Gilson was assigned to the staff of Brig.-Gen. Haan and went overseas with the now famous Thirty-second Division. In France he was reassigned to the staff of Brig.-Gen. Irwin, Fifty-seventh Field Artillery Brigade, upon which he now is serving as major. His command has been in the thick of the fighting north and northeast of Chateau-Thierry for more than 100 days.

W. F. Myers, Columbus Grove, Ohio, who was formerly with R. Hershel & Co., Saginaw; and the Rock Island Co., will represent the Ohio Happy Farmer Tractor Co. in sales capacity in western Ohio.

Monte W. Sohn, for 9 months associate editor of Motor Life, has been made editor. He assumed complete responsibility Nov. 1.

L. A. Wofford, formerly traveling representative for the Buick Motor Co., Kansas City, has become automobile editor of the Kansas City Journal.

Earl L. Woods, sales manager of the tractor department of the J. I. Case Plow Co., Racine, Wis., has accepted a commission as a captain in the Motor Transport Corps and will go overseas shortly with Unit 304, to which he reported for duty at Ft. Sam Houston, Tex., on Nov. 10.

W. T. Norton, Jr., formerly chief engineer of the manufacturing division of the Selden Truck Sales Co., Rochester, recently returned from special work in France in connection with motor truck transportation, has been assigned to the Executive Branch, Engineering Division, Motor Transport Corps, at Washington, D. C.

Jesse E. Haines has been appointed general manager and secretary of the Acason Sales Co., 1803 Market Street, Philadelphia, local distributor of Acason motor trucks.

**Back to Business—Let's Start Right**

#### Urlin C. James

BUFFALO, Nov. 11—Urlin C. Jaynes, son of Wellington C. Jaynes, proprietor of the Jaynes Automobile Sales Co., died of pneumonia Oct. 30 after a short illness. Mr. Jaynes was 33 years old and was the manager of his father's business.

**Back to Business—Let's Start Right**

#### James W. Graham

COLUMBUS, Nov. 11—James W. Graham, president of the C. A. S. Products Co., manufacturers of gears and other parts and accessories died at his late residence last week from an attack of influenza. He was 29 years of age and

reorganized the present company from the old Foster Gear Co. about three years ago. His former home was at Carthage, Canada.

**Back to Business—Let's Start Right**

#### GORDON HEADS SELDEN SALES

ROCHESTER, Nov. 11—George C. Gordon was elected president of the Selden Truck Sales Co. at the recent meeting, other officers elected being: Vice-presidents, Wm. C. Barry, R. H. Salmons, H. T. Boulden and W. F. Reynolds; secretary, E. B. Osborn; treasurer, F. J. Kolb.

**Back to Business—Let's Start Right**

#### Make Fordsons in Mexico

TAMPICO, MEXICO, Nov. 11—It is stated that the manufacture of Fordson tractors in Mexico will be done by a company which will be organized for that purpose under the laws of Mexico. The commission sent to Mexico by Henry Ford has made its investigations and returned to the States to make its report, which it is understood is entirely favorable to the project.

Mexican products will be used in the manufacture of the tractors and Mr. Ford has declared that none of the money made in the business will be taken out of the country but will be used in increasing the output and increasing the wages and bettering the condition of the employees.

The Mexico plant will not be on as extensive a scale as the ones in the United States, but it will keep pace with the demands of the market in Mexico and the Central American countries, in accord with the Ford policy, it is announced.

**Back to Business—Let's Start Right**

#### Opens New Era for Trailers

BOSTON, Nov. 9—The first time a motor truck drawing a trailer ever made the trip across the Alleghany Mountains, or any other mountains for that matter, carrying full capacity loads was this week when a 2-ton Walter truck drawing a 5-ton Troy trailer arrived at Boston. The two machines came direct from the Goodyear Tire and Rubber company's factory at Akron, and they carried 7 tons and 300 lb. of Goodyear products. The distance was 740 miles.

**Back to Business—Let's Start Right**

#### Gifford Off to Coast

KANSAS CITY, Nov. 11—Ward C. Gifford, assistant to E. E. Peake, executive secretary of the National Automobile Dealers' Association, is on the Pacific Coast in the interests of the membership campaign for the association. He will make his headquarters at Los Angeles and later at San Francisco, and will work in that territory until the Coast is fully organized. Peake attended a meeting at Pueblo and then went to the Coast.

## Highways Transport to Recruit M.T.C. Drivers

### Will Organize Force of 200,000—Greater Substitution of Women for Men Planned

WASHINGTON, Nov. 2—The task of assisting in recruiting men for the Motor Transport Corps of the Army, which is now being organized along such comprehensive lines as to call for a force approximating 200,000 men and for motor transportation of the value of \$130,000,000, in addition to the value of such transport already in the service, has been assigned to the Highways Transport Committee, Council of National Defense, by General C. B. Drake, Chief of the Motor Transport Corps.

The carrying out of this assignment for one of the great branches of the war machinery means that the whole organization of the Highways Transport Committee, including the regional directors, the committees organized on its behalf by the State Councils of Defense throughout the country, and their local committees, will be given an increased share in the vital task of winning the war.

In order to prevent the disruption which would follow if tens of thousands of skilled men were taken away from the great organization engaged in operating and maintaining the industrial transport service of the country, and at the same time to provide an adequate force, it is necessary to work out for the Motor Transport Corps some plan to secure substitutes for those thus taken away.

One way of meeting this situation is by substituting women for men, which involves recruiting these women and placing them in training for service while the men in the industry are being withdrawn for army purposes.

#### Substitute Women for Men

The problem which would inevitably develop in carrying out this plan of substituting women for men in the handling of industrial vehicles over the highways would include a determination of how many men in a given locality are employed on types of vehicle which might be adapted to handling by women, and, again, the adaption of the service of such vehicles so as to provide a satisfactory environment for female operatives.

The possible selection and training of women to take the place of men in the handling of various kinds of highway transportation, and simultaneously the selection and training of men whose age makes them unavailable for army service, will be conducted on the basis that these people are volunteers in much the same sense as are those entering the army.

In satisfactorily handling domestic transportation problems, which are necessary to the health and comfort of the civilian army in this country as well as an essential line in the transportation system which supplies our war industries and the army overseas these volunteers will be doing their bit in a big way.



## Rural Motor Express Idea Taking, Says Miles

**In Report to N. A. C. C. Says Work of Committee Is Getting Results—  
Urges Dealers to Get Into Movement**

NEW YORK, Nov. 11—In his report to the members of the National Automobile Chamber of Commerce, S. A. Miles, member of the National Motor Truck Committee, gave some interesting facts regarding his work in the encouragement of Rural Motor Express lines.

It shows both an increase in the food supply of the country and a growing appreciation of the necessity for motor trucks for rural motor routes to the saving of the time of the farmers and to the lowering of costs of food supplies to the general public.

Among other things in the report were the following: Working in co-operation with the Highways Transport Committee of the Council of National Defense we have succeeded in interesting a great many of our members, a vast number of dealers, country agents, food administrators, highway departments, chambers of commerce, boards of trade, bankers, merchants and farmers. The formation of companies and the operation of routes has developed to such an extent that it has been impossible to keep pace with them and it is, therefore, impossible to give an accurate estimate of the business resulting.

It is reasonably sure that Rural Motor Express has been responsible, within the last four months, for the sale of 500 or more trucks, and that unless the development of the work is interfered with by government restrictions the number will, now that their successful operation has been so generally demonstrated, increase enormously.

Correspondence in our files enables us to trace, definitely, the sale of 100 trucks, including the Packard, White, Service, Signal, Bethlehem, Denby, Oakland, Republic, Acme, Clydesdale and International to persons whose names we have on record. We know that at least 100 more have been sold within the last two months, but have not yet been able to obtain the names of the trucks. The International Harvester Co. sold, in Iowa alone, between 30 and 40, and expects to close sales for 150 trucks for service in and around Cedar Rapids. These facts are mentioned to show how important Rural Motor Express has become.

Many dealers in passenger cars have been induced, through our work, to take on trucks and participate in the Rural Motor Express movement. For example, an Oldsmobile dealer in California has taken on White trucks and is operating around San Bernardino. He says that our efforts were entirely responsible. Lines are being organized about St. Louis, where, it is estimated, between 20 and 30 G. M. C. trucks have been sold through C. E. Lightfoot.

Sales managers of our members are co-operating nicely but cannot do so too actively. One of them complains that on account of his inability to make deliveries his dealers are unruly and suggests that we can do more good with

them direct than he can. In such cases we are glad to make the attempt.

Standardization of rates is a difficult subject and we are still without sufficient data to enable us to make recommendations which will cover all parts of the country. We are, however, co-operating with several states, and particularly with the Public Utilities Commission of the State of New York.

What may be accomplished is indicated by a report of the Motor Truck Overland Express, which runs between Albert Lea, Minn., and Mason City, Iowa.

State Highways Transport Committees have acknowledged that our work is beneficial, and without it they could not accomplish results. Sales managers are advised by this office of business in prospect and sometimes of actual sales of their trucks made for Rural Motor Express purposes. Every day we are advised of new lines, each employing one or more trucks. Certain it is that our records and our literature are producing results.

There is no reason to suppose that this line of activity will cease to be valuable with the close of the war, because we are reaching out into communities which never have been and probably never will be served by railroads. It was interesting to me, during a recent tour, to note evidences of the formation of Rural Motor Express Lines in the form of small platforms built at the roadside, sometimes near a farm house.

In about three months we have issued and sent out 175,000 pieces of printed matter, designed to instruct organizers of state committees, to inform operators of lines and generally to educate the press and people up to the Rural Motor Express idea.

We are demonstrating that Rural Motor Express Lines will induce the farmer to practise more intensive methods; give more food in the centers of population; give the farmer larger profit; give the consumer more food at lower cost; open up a vast market for the manufacturer and dealer of motor

trucks, and help feed our boys and our Allies.

Finally, we call your attention to the fact that the value of our efforts to individual members is now dependent largely upon themselves. There are in existence a number of State Highways Transport Committees and other bodies whose business it is to push along Rural Motor Express and other work. These bodies are made up of volunteers, and few of them have made such a careful study of the work as to be fully awake to its importance.

Furthermore, a state committee cannot possibly reach out into all of the districts in which express lines can be operated profitably, because the routes are, so to speak, hidden away in country districts which the average city man never reaches. But in everyone of those districts *there are dealers who are or ought to be representing truck manufacturers.*

We ask these dealers to work with and through the state bodies so far as it is possible, but in the event that the state bodies are inactive, or are too far away, or are, for some reason, not up to the work, we expect the dealers themselves, either by forming local bodies or individually to see that the work is pushed in their neighborhoods.

Every country dealer is familiar with the roads around about him, knows all of the merchants in his own and nearby towns, and knows something, at least, of the farming communities through which neighboring roads pass.

In pointing to this fact we have in mind not merely the sale of cars and building of the truck business, but the further and highly important fact that every truck put at work on the road means an increase of our food supply. If any member knows of any dealer who is not posted on the subject, we should be glad to supply him or any member printed matter covering every phase of the question, from the advantages of the system down to the selection of routes and the course of procedure necessary to successful operation.

**Back to Business—Let's Start Right**

### There Is Money for Garages and Dealers

*(Continued from page 17)*

tickets are in the following units: 5c., 10c., 25c., 50c., 55c., 70c., 90c., \$1.05. The tickets of each denomination are numbered serially—5c. from one to 100, 10c. from 101 to 200, etc. The company gives the employees the number and denomination of tickets, corresponding to the 30 per cent on each job finished. The tickets are cashed on Saturdays.

The moving of cars in the "laundry" is a time-consuming element, and an important part of the work. Naturally the workmen are not attired for sitting on clean cushions. When the workmen don't move the cars about by hand Mrs. Voorhees gets in and takes them to the stalls, or to storage in another part of the yard. Mrs. Voorhees also attends to the bookkeeping, to receiving cars and taking orders and to checking out. The laundry does not sell gasoline.

### Coming Events

Pittsburgh, Pa.—Nov. 11-16—Fall Automobile Show, Motor Square Garden, Automobile Dealers' Association of Pittsburgh.

Macon, Ga.—Nov. 19-20—State Fair and tractor demonstrations.

Atlantic City, N. J.—Dec. 4, 5, 6—War Emergency and Reconstruction Conference of the War Service Committees.

Akron, O.—Dec. 5-6—Annual Convention, Ohio Automobile Trade Association.

1919

Kansas City, Mo.—Feb. 10-15—Fourth Annual Tractor Show, Sweeney Bldg., Kansas City Tractor Club. Guy H. Hall, Sec.

Wichita, Kan.—Feb. 18-22—Annual Mid-West Tractor & Thresher Show, Wichita Tractor & Thresher Club: Forum.

Montreal, Canada.—April 5-12—Automobile and Used Car Exposition, Windsor Hotel. T. C. Kirby, Show Mgr.

# MOTOR WORLD GUIDE

Trucks

Trucks

Name and Model	Tons Capacity	Chassis Price	Cylinder Range	TIRES	
				F.	R.
A & B.....	3T 2	.....	4-31x5	36x7	36x7
A & B.....	5T 6	.....	4-31x5	36x7	36x7
Academy.....	1T 1	.....	4-31x5	36x7	36x7
Academy.....	2T 2	.....	4-31x5	36x7	36x7
Academy.....	3T 3	.....	4-31x5	36x7	36x7
Academy.....	4T 4	.....	4-31x5	36x7	36x7
Academy.....	5T 5	.....	4-31x5	36x7	36x7
Academy.....	6T 6	.....	4-31x5	36x7	36x7
Academy.....	7T 7	.....	4-31x5	36x7	36x7
Academy.....	8T 8	.....	4-31x5	36x7	36x7
Academy.....	9T 9	.....	4-31x5	36x7	36x7
Academy.....	10T 10	.....	4-31x5	36x7	36x7
Academy.....	11T 11	.....	4-31x5	36x7	36x7
Academy.....	12T 12	.....	4-31x5	36x7	36x7
Academy.....	13T 13	.....	4-31x5	36x7	36x7
Academy.....	14T 14	.....	4-31x5	36x7	36x7
Academy.....	15T 15	.....	4-31x5	36x7	36x7
Academy.....	16T 16	.....	4-31x5	36x7	36x7
Academy.....	17T 17	.....	4-31x5	36x7	36x7
Academy.....	18T 18	.....	4-31x5	36x7	36x7
Academy.....	19T 19	.....	4-31x5	36x7	36x7
Academy.....	20T 20	.....	4-31x5	36x7	36x7
Academy.....	21T 21	.....	4-31x5	36x7	36x7
Academy.....	22T 22	.....	4-31x5	36x7	36x7
Academy.....	23T 23	.....	4-31x5	36x7	36x7
Academy.....	24T 24	.....	4-31x5	36x7	36x7
Academy.....	25T 25	.....	4-31x5	36x7	36x7
Academy.....	26T 26	.....	4-31x5	36x7	36x7
Academy.....	27T 27	.....	4-31x5	36x7	36x7
Academy.....	28T 28	.....	4-31x5	36x7	36x7
Academy.....	29T 29	.....	4-31x5	36x7	36x7
Academy.....	30T 30	.....	4-31x5	36x7	36x7
Academy.....	31T 31	.....	4-31x5	36x7	36x7
Academy.....	32T 32	.....	4-31x5	36x7	36x7
Academy.....	33T 33	.....	4-31x5	36x7	36x7
Academy.....	34T 34	.....	4-31x5	36x7	36x7
Academy.....	35T 35	.....	4-31x5	36x7	36x7
Academy.....	36T 36	.....	4-31x5	36x7	36x7
Academy.....	37T 37	.....	4-31x5	36x7	36x7
Academy.....	38T 38	.....	4-31x5	36x7	36x7
Academy.....	39T 39	.....	4-31x5	36x7	36x7
Academy.....	40T 40	.....	4-31x5	36x7	36x7
Academy.....	41T 41	.....	4-31x5	36x7	36x7
Academy.....	42T 42	.....	4-31x5	36x7	36x7
Academy.....	43T 43	.....	4-31x5	36x7	36x7
Academy.....	44T 44	.....	4-31x5	36x7	36x7
Academy.....	45T 45	.....	4-31x5	36x7	36x7
Academy.....	46T 46	.....	4-31x5	36x7	36x7
Academy.....	47T 47	.....	4-31x5	36x7	36x7
Academy.....	48T 48	.....	4-31x5	36x7	36x7
Academy.....	49T 49	.....	4-31x5	36x7	36x7
Academy.....	50T 50	.....	4-31x5	36x7	36x7
Academy.....	51T 51	.....	4-31x5	36x7	36x7
Academy.....	52T 52	.....	4-31x5	36x7	36x7
Academy.....	53T 53	.....	4-31x5	36x7	36x7
Academy.....	54T 54	.....	4-31x5	36x7	36x7
Academy.....	55T 55	.....	4-31x5	36x7	36x7
Academy.....	56T 56	.....	4-31x5	36x7	36x7
Academy.....	57T 57	.....	4-31x5	36x7	36x7
Academy.....	58T 58	.....	4-31x5	36x7	36x7
Academy.....	59T 59	.....	4-31x5	36x7	36x7
Academy.....	60T 60	.....	4-31x5	36x7	36x7
Academy.....	61T 61	.....	4-31x5	36x7	36x7
Academy.....	62T 62	.....	4-31x5	36x7	36x7
Academy.....	63T 63	.....	4-31x5	36x7	36x7
Academy.....	64T 64	.....	4-31x5	36x7	36x7
Academy.....	65T 65	.....	4-31x5	36x7	36x7
Academy.....	66T 66	.....	4-31x5	36x7	36x7
Academy.....	67T 67	.....	4-31x5	36x7	36x7
Academy.....	68T 68	.....	4-31x5	36x7	36x7
Academy.....	69T 69	.....	4-31x5	36x7	36x7
Academy.....	70T 70	.....	4-31x5	36x7	36x7
Academy.....	71T 71	.....	4-31x5	36x7	36x7
Academy.....	72T 72	.....	4-31x5	36x7	36x7
Academy.....	73T 73	.....	4-31x5	36x7	36x7
Academy.....	74T 74	.....	4-31x5	36x7	36x7
Academy.....	75T 75	.....	4-31x5	36x7	36x7
Academy.....	76T 76	.....	4-31x5	36x7	36x7
Academy.....	77T 77	.....	4-31x5	36x7	36x7
Academy.....	78T 78	.....	4-31x5	36x7	36x7
Academy.....	79T 79	.....	4-31x5	36x7	36x7
Academy.....	80T 80	.....	4-31x5	36x7	36x7
Academy.....	81T 81	.....	4-31x5	36x7	36x7
Academy.....	82T 82	.....	4-31x5	36x7	36x7
Academy.....	83T 83	.....	4-31x5	36x7	36x7
Academy.....	84T 84	.....	4-31x5	36x7	36x7
Academy.....	85T 85	.....	4-31x5	36x7	36x7
Academy.....	86T 86	.....	4-31x5	36x7	36x7
Academy.....	87T 87	.....	4-31x5	36x7	36x7
Academy.....	88T 88	.....	4-31x5	36x7	36x7
Academy.....	89T 89	.....	4-31x5	36x7	36x7
Academy.....	90T 90	.....	4-31x5	36x7	36x7
Academy.....	91T 91	.....	4-31x5	36x7	36x7
Academy.....	92T 92	.....	4-31x5	36x7	36x7
Academy.....	93T 93	.....	4-31x5	36x7	36x7
Academy.....	94T 94	.....	4-31x5	36x7	36x7
Academy.....	95T 95	.....	4-31x5	36x7	36x7
Academy.....	96T 96	.....	4-31x5	36x7	36x7
Academy.....	97T 97	.....	4-31x5	36x7	36x7
Academy.....	98T 98	.....	4-31x5	36x7	36x7
Academy.....	99T 99	.....	4-31x5	36x7	36x7
Academy.....	100T 100	.....	4-31x5	36x7	36x7

Name and Model	Tire Capacity	Chassis Price	Cylinder Range	F. B.	TIRES
Studebaker	SF	1045	4-31x5	35x41	25x41
Studebaker	T	1400	4-31x5	35x5	25x5
Sulzbacker	F 1	2350	4-31x41	35x5	35x5
Sulzbacker	E	2850	4-31x5	35x4	35x4
Sulzbacker	A	1600	4-31x5	24x23	24x24
Superior	C	2200	4-31x5	35x4	35x5
Superior	A	1100	4-31x5	35x41	35x41
Tiffin	GW 1	2075	4-31x5	35x41	35x41
Tiffin	MW 2	2750	4-31x5	35x41	35x41
Tiffin	PW 3	3600	4-31x5	35x5	35x5
Tiffin	EW 5	4850	6-31x5	35x5	40x54
Tiffin	SW 6	4850	6-31x5	35x5	40x54
Tiffin	3	4300	4-31x5	35x5	40x54
Tiffin	5	5150	4-31x5	35x5	40x54
Tram					
Tram					
Transport Tractor	N 5	2750	4-31x5	34x23	34x24
Triangle	A 1	2185	4-31x5	24x23	24x24
United	AX 1	...	4-31x5	24x23	24x25
United	BX 2	...	4-31x5	35x5	35x5
United	CX 3	...	4-31x5	35x5	35x5
United	VX 5	...	4-31x5	35x5	40x5
United Tractor					
U.S.	E	2800	4-31x5	34x4	35x4
U.S.	H 2	3250	4-31x5	34x4	35x4
U.S.	J 3	3500	4-31x5	35x5	35x5
U.S.	J 3	3950	4-31x5	35x5	40x54
U.S.	K 5	4850	4-31x5	35x5	40x54
Universal	G 1	...	4-31x5	34x23	34x5
Universal	D 2	...	4-31x5	35x4	35x4
Universal	A 3	...	4-31x5	35x5	35x5
Vale	25A 2	2950	4-31x5	35x4	35x7
Vale	26 3	3900	4-31x5	35x5	35x5
Vin	21	945	4-31x5	31x4	31x4
Vin	25	2195	4-31x5	34x4	34x4
Vin	22	2465	4-31x5	35x4	35x5
Vin	23	4345	4-31x5	35x4	35x4
Walsh	F 5	...	4-31x5	40x5	40x5
Whelan	...	4050	4-31x5	35x4	40x54
White	GBE 4	2300	4-31x5	34x4	34x4
White	TBC 1	3300	4-31x5	35x3	35x3
White	TAD 3	4100	4-31x5	35x5	40x54
White	TCD 5	5000	4-31x5	35x5	40x54
Wichita	A 1	1850	4-31x5	24x23	24x4
Wichita	K 1	2000	4-31x5	26x3	26x4
Wichita	L 1	2250	4-31x5	26x3	26x4
Wichita	R 2	2500	4-31x5	24x23	24x5
Wichita	R 3	2950	4-31x5	35x4	35x5
Wichita	Q 5	2750	4-31x5	35x5	35x5
Wichita	Q 5	4600	4-31x5	35x5	35x5
Wilson	S 1	1950	4-31x5	35x5	35x5
Wilson	X 1	2775	4-31x5	35x4	35x5
Wilson	Q 2	3250	4-31x5	35x4	35x5
Wilson	P 3	4500	4-31x5	35x5	35x5
Wilson	W 5	4500	4-31x5	35x5	35x5
Wilson	E 3	1680	4-31x5	35x5	35x5
Wilson	E 3	3800	4-31x5	35x4	35x4
Wilson	34 1	3250	4-31x5	24x23	24x23
Weather	48 2	2200	4-31x5	35x4	35x4
Weather	68 3	3100	4-31x5	35x5	35x5
Weather	58 4	4300	4-31x5	35x5	40x54
Weather	104 5	5000	4-31x5	35x5	40x54
Weather	128 6	5250	4-31x5	35x5	40x54
Weather	148 7	5400	4-31x5	35x5	40x54
Win W.E.	WD18 1	...	4-31x5	35x5	35x7
Win W.E.	WD18 2	...	4-31x5	35x5	35x7
Win W.E.	WD18 3	2180	4-31x5	35x4	35x5
Win W.E.	WD18 4	...	4-31x5	35x5	35x5

Name and Model	Tons Capacity	Chassis Price	Cylinder and Valve Type	P. R.
Standard	W25 31	3000	4-11251 36x4	35x4d
Standard	W50 5	4750	4-11251 36x5	40x5d
Standard	W50 6	5150	4-11251 36x5	38x7
Standard	W50 7	5400	4-11251 36x4	38x7
Schenck	W50 10	5950	4-11251 36x5	38x5d
Schenck	W50 12	6350	4-11251 36x5	38x5d
Schenck	W50 15	6800	4-11251 36x5	40x6d
Schenck	W50 18	7200	4-11251 36x5	40x10
Schenck	W50 21	7600	4-11251 36x5	40x10
Schenck	W50 24	8000	4-11251 36x5	40x10
Schenck	W50 27	8400	4-11251 36x5	40x10
Schenck	W50 30	8800	4-11251 36x5	40x10
Schenck	W50 33	9200	4-11251 36x5	40x10
Schenck	W50 36	9600	4-11251 36x5	40x10
Schenck	W50 39	10000	4-11251 36x5	40x10
Schenck	W50 42	10400	4-11251 36x5	40x10
Schenck	W50 45	10800	4-11251 36x5	40x10
Schenck	W50 48	11200	4-11251 36x5	40x10
Schenck	W50 51	11600	4-11251 36x5	40x10
Schenck	W50 54	12000	4-11251 36x5	40x10
Schenck	W50 57	12400	4-11251 36x5	40x10
Schenck	W50 60	12800	4-11251 36x5	40x10
Schenck	W50 63	13200	4-11251 36x5	40x10
Schenck	W50 66	13600	4-11251 36x5	40x10
Schenck	W50 69	14000	4-11251 36x5	40x10
Schenck	W50 72	14400	4-11251 36x5	40x10
Schenck	W50 75	14800	4-11251 36x5	40x10
Schenck	W50 78	15200	4-11251 36x5	40x10
Schenck	W50 81	15600	4-11251 36x5	40x10
Schenck	W50 84	16000	4-11251 36x5	40x10
Schenck	W50 87	16400	4-11251 36x5	40x10
Schenck	W50 90	16800	4-11251 36x5	40x10
Schenck	W50 93	17200	4-11251 36x5	40x10
Schenck	W50 96	17600	4-11251 36x5	40x10
Schenck	W50 99	18000	4-11251 36x5	40x10
Schenck	W50 102	18400	4-11251 36x5	40x10
Schenck	W50 105	18800	4-11251 36x5	40x10
Schenck	W50 108	19200	4-11251 36x5	40x10
Schenck	W50 111	19600	4-11251 36x5	40x10
Schenck	W50 114	20000	4-11251 36x5	40x10
Schenck	W50 117	20400	4-11251 36x5	40x10
Schenck	W50 120	20800	4-11251 36x5	40x10
Schenck	W50 123	21200	4-11251 36x5	40x10
Schenck	W50 126	21600	4-11251 36x5	40x10
Schenck	W50 129	22000	4-11251 36x5	40x10
Schenck	W50 132	22400	4-11251 36x5	40x10
Schenck	W50 135	22800	4-11251 36x5	40x10
Schenck	W50 138	23200	4-11251 36x5	40x10
Schenck	W50 141	23600	4-11251 36x5	40x10
Schenck	W50 144	24000	4-11251 36x5	40x10
Schenck	W50 147	24400	4-11251 36x5	40x10
Schenck	W50 150	24800	4-11251 36x5	40x10
Schenck	W50 153	25200	4-11251 36x5	40x10
Schenck	W50 156	25600	4-11251 36x5	40x10
Schenck	W50 159	26000	4-11251 36x5	40x10
Schenck	W50 162	26400	4-11251 36x5	40x10
Schenck	W50 165	26800	4-11251 36x5	40x10
Schenck	W50 168	27200	4-11251 36x5	40x10
Schenck	W50 171	27600	4-11251 36x5	40x10
Schenck	W50 174	28000	4-11251 36x5	40x10
Schenck	W50 177	28400	4-11251 36x5	40x10
Schenck	W50 180	28800	4-11251 36x5	40x10
Schenck	W50 183	29200	4-11251 36x5	40x10
Schenck	W50 186	29600	4-11251 36x5	40x10
Schenck	W50 189	30000	4-11251 36x5	40x10
Schenck	W50 192	30400	4-11251 36x5	40x10

Name and Model	Tons Capacity	Classical Price	Cylinder Weight and Details	P.	R.	THRES
Penhard.....A 1	1196	4-3125	32x31	32x31	32x31	
Penhard.....B 1	1386	4-3125	32x31	32x31	32x31	
Penhard.....C 1	3150	4-3125	34x34	34x34	34x34	
Porter.....2	3700	4-3125	34x34	34x34	34x34	
Porter.....3	4250	4-3125	36x36	36x36	36x36	
Porter.....4	5000	4-3125	36x36	36x36	36x36	
Porter.....5	5000	4-3125	36x36	36x36	36x36	
Porter.....TC4	4150	4-1125	36x36	36x36	36x36	
Porter.....TCS	4700	4-1125	36x36	36x36	36x36	
Reco-Arrow.....2	3750	4-4125	36x36	36x36	36x36	
Reco-Arrow.....5	5500	4-4125	36x36	36x36	36x36	
Tablar.....1	1250	4-3125	32x31	32x31	32x31	
Tablar.....2	1350	4-3125	32x31	32x31	32x31	
Tablar.....3	1595	4-3125	32x31	32x31	32x31	
Tablar.....4	2895	4-3125	36x36	36x36	36x36	
Tablar.....5	2985	4-3125	36x36	36x36	36x36	
Tablar.....6	1250	4-3125	32x31	32x31	32x31	
Tablar.....7	1095	4-3125	32x31	32x31	32x31	
Tablar.....8	1295	4-3125	32x31	32x31	32x31	
Tablar.....9	1455	4-3125	32x31	32x31	32x31	
Tablar.....10	1775	4-3125	34x34	34x34	34x34	
Tablar.....11	2105	4-4125	34x34	34x34	34x34	
Tablar.....12	3405	4-4125	36x36	36x36	36x36	
Tablar.....13	3405	4-4125	36x36	36x36	36x36	
Tablar.....14	905	4-3125	31x31	31x31	31x31	
Tablar.....15	4-4125	36x36	36x36	36x36	36x36	
Tablar.....16	4-4125	36x36	36x36	36x36	36x36	
Tablar.....17	3000	4-4125	34x34	34x34	34x34	
Tablar.....18	3250	4-4125	34x34	34x34	34x34	
Tablar.....19	3900	4-4125	36x36	36x36	36x36	
Tablar.....20	4900	4-4125	36x36	36x36	36x36	
Tablar.....21	895	4-3125	31x31	31x31	31x31	
Tablar.....22	2050	4-3125	34x34	34x34	34x34	
Tablar.....23	2550	4-3125	34x34	34x34	34x34	
Tablar.....24	3250	4-4125	36x36	36x36	36x36	
Tablar.....25	4250	4-4125	36x36	36x36	36x36	
Tablar.....26	3975	4-4125	36x36	36x36	36x36	
Tablar.....27	3975	4-4125	36x36	36x36	36x36	

[illegible]

## MERCHANDISING SPECIFICATIONS

**THE tables which appear on these pages have been prepared with the thought of assisting the salesman in the merchandising of passenger cars and commercial vehicles. The data have been limited to those facts which the average salesman finds necessary for comparative purposes and as sales ammunition.**

**The tables will be corrected and revised down to date every week.**

**They will be supplemented by others from week to week, intended solely for the gargeman and repairman who has the maintenance of passenger cars and commercial vehicles as his work.**

## Passenger Cars

## MOTOR WORLD GUIDE

## Passenger Cars

Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2- Pass.	5- Pass.	7- Pass.
ALLEN Series 41	4-31x5	Conn	A-Lite	112	32x3 1/2	SS	.....	\$1285	.....
AMERICAN B	6-31x5	A-Kent	West	122	32x4	SS	1645	1595	1695
ANDERSON	6-31x5	Conn	West	120	32x4	SS	.....	11925	.....
200-F	6-31x5	Boech	West	120	32x4	SS	.....	11925	.....
APPERSON	8-31x5	Remy	Eljor	120	32x4	SS	12850	.....	2800
8-18	6-31x5	Remy	Eljor	120	32x4	SS	12850	.....	4000
ANNAPUR	6-31x5	Remy	Eljor	120	32x4	SS	12850	.....	4000
6-39-B	6-31x5	Remy	Eljor	120	32x4	SS	12850	.....	4000
6-44	6-31x5	Remy	Eljor	120	32x4	SS	12850	.....	4000
BIDDLE	4-31x5	Esman	G & D	121	32x4	QD	2700	.....	17750
BRISCOE	4-31x5	Conn	A-Lite	104	30x3 1/2	C	885	885	.....
B-24	4-31x5	Conn	A-Lite	104	30x3 1/2	C	885	885	.....
B-34-35	4-31x5	Conn	A-Lite	104	30x3 1/2	C	885	885	.....
B-44-45	4-31x5	Conn	A-Lite	104	30x3 1/2	C	885	885	.....
E-49	4-31x5	Conn	A-Lite	104	30x3 1/2	C	885	885	.....
CADILLAC	8-31x5	Delco	Delco	125	35x5	SS	.....	1485	.....
57	8-31x5	Delco	Delco	125	35x5	SS	.....	1485	.....
CASE	6-31x5	Wetels	Wetels	126	35x5	SS	11875	1875	1875
U	6-31x5	Wetels	Wetels	126	35x5	SS	11875	1875	1875
CHALMERS	6-31x5	Remy	Remy	117	32x4	SS	1565	1565	.....
6-30	6-31x5	Remy	Remy	117	32x4	SS	1565	1565	.....
CHANDLER	6-31x5	Boech	Boech	123	34x4	SS	11795	11875	1795
CHEVROLET	4-31x5	Remy	A-Lite	102	30x3 1/2	C	715	725	.....
490	4-31x5	Remy	A-Lite	102	30x3 1/2	C	715	725	.....
FA	4-31x5	Remy	A-Lite	102	30x3 1/2	C	715	725	.....
D	4-31x5	Remy	A-Lite	102	30x3 1/2	C	715	725	.....
COLE	8-31x5	Delco	Delco	127	33x5	SS	2595	2595	2595
COLUMBIA	6-31x5	Delco	Delco	115	32x4	SS	11595	1580	.....
C&D	6-31x5	Delco	Delco	115	32x4	SS	11595	1580	.....
CROW-ELKHART	4-31x5	Conn	Dyneto	114	32x3 1/2	SS	1095	1165	1095
CE-36	4-31x5	Conn	Dyneto	114	32x3 1/2	SS	1095	1165	1095
DANIELS	8-31x5	Wetels	Wetels	127	34x4	QDR	3500	3500	3500
DAVIS	6-31x5	Delco	Delco	119	34x4	SS	1685	1685	.....
H-I	6-31x5	Delco	Delco	119	34x4	SS	1685	1685	.....
DIXIE FLYER	4-31x5	Conn	Dyneto	112	32x3 1/2	SS	1095	1095	.....
1835	4-31x5	Conn	Dyneto	112	32x3 1/2	SS	1095	1095	.....
DODGE BROTHERS	4-31x5	Conn	Dyneto	112	32x3 1/2	SS	1095	1095	.....
DORRIS	6-4	25	Boech	132	33x5	SS	.....	985	.....
6-30	6-4	25	Boech	132	33x5	SS	.....	985	.....
DORT	4-31x5	Conn	Wetels	105	30x3 1/2	QD	985	985	.....
11	4-31x5	Conn	Wetels	105	30x3 1/2	QD	985	985	.....
ELCAR	4-31x5	A-Kent	Dyneto	116	33x4	SS	1175	1175	.....
D.F.	4-31x5	A-Kent	Dyneto	116	33x4	SS	1175	1175	.....
ELGIN	6-31x5	Remy	Wagner	118	33x4	SS	1195	1295	.....
H	6-31x5	Remy	Wagner	118	33x4	SS	1195	1295	.....
EMPIRE	4-31x5	Conn	A-Lite	115	33x4	SS	1165	1125	.....
50-51	4-31x5	Conn	A-Lite	115	33x4	SS	1165	1125	.....
72	4-31x5	Conn	A-Lite	115	33x4	SS	1165	1125	.....
73	4-31x5	Conn	A-Lite	115	33x4	SS	1165	1125	.....
EMSEX	4-31x5	Wetels	Delco	108 1/2	32x4	SS	.....	1395	.....
A	4-31x5	Wetels	Delco	108 1/2	32x4	SS	.....	1395	.....
FORD	4-31x5	Conn	A-Lite	115	33x4	SS	1165	1125	.....
T	4-31x5	Conn	A-Lite	115	33x4	SS	1165	1125	.....
FRANKLIN	6-31x5	A-Kent	Dyneto	115	33x4	SS	2550	2000	12000
9	6-31x5	A-Kent	Dyneto	115	33x4	SS	2550	2000	12000

ABBREVIATIONS - "A. Kent" Atwater Kent, "A-Lite" Auto-Lite, "Conn" Connecticut, "G & D" Gray & Davis, "Esman" Esman, "L.N." Leese-Norilla, "N. E." North East, "Wetels" Westinghouse, "W. Lard" Ward Leonard, "SS" Straight axle, "QD" Quick Detachable, "C" Clincher, "QDR" Quick Detachable Reversible, "N.E." North East, "Wetels" Westinghouse, "W. Lard" Ward Leonard, "SS" Straight axle.

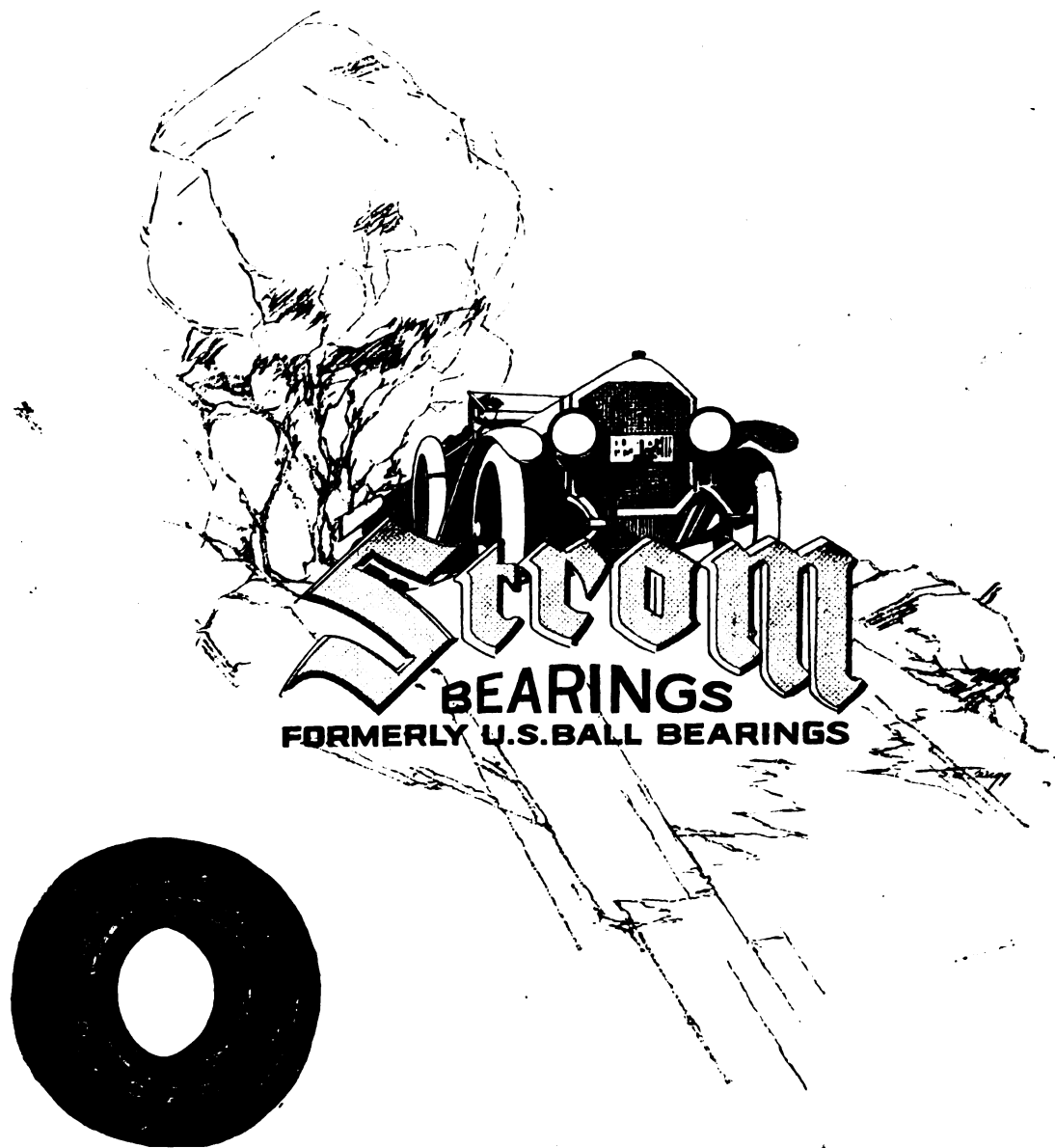
# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 8

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, NOVEMBER 20, 1918

Fifteen cents a c  
Two dollars a



U. S. BALL BEARING MFG. CO., (*Conrad Patent Licensee*) CHICAGO, ILL., U. S. A.



## Uncle Sam Uses Crawler Tractors

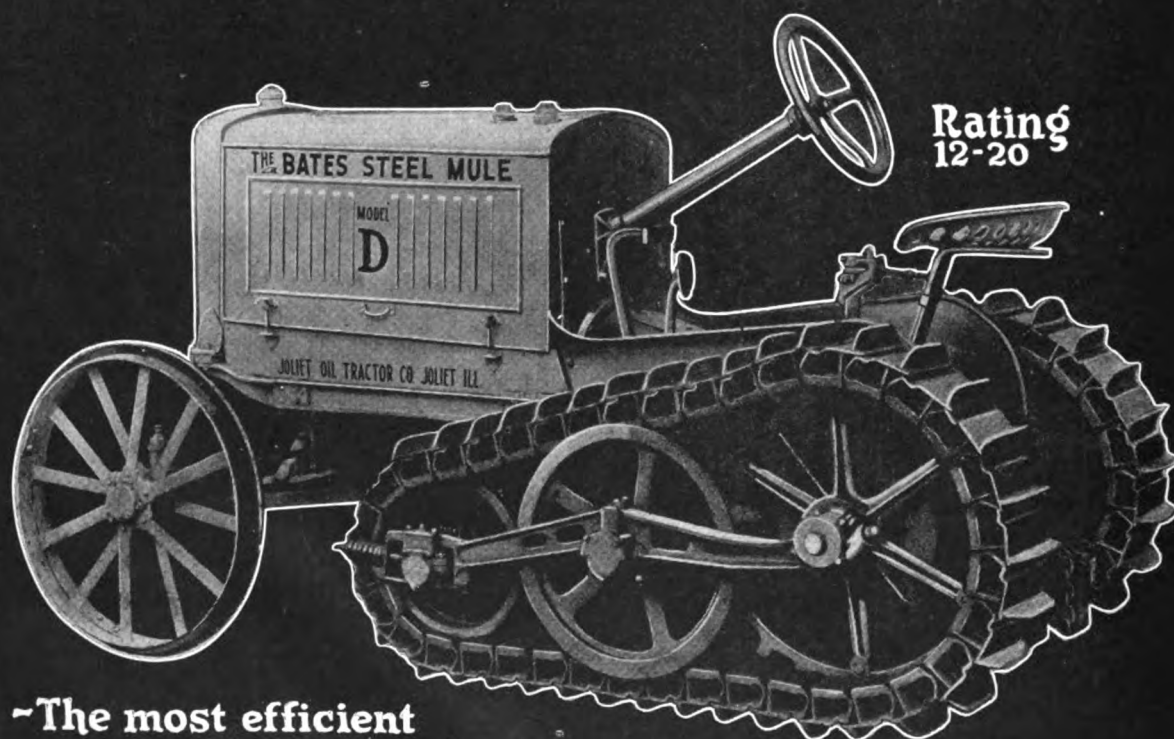
Perhaps the most convincing proof of the efficiency of the crawler type of drive is the performance of the "land battleships" in Europe, the war tanks. The way these go through everything and over everything is truly remarkable.

In Uncle Sam's war work he uses tractors of the crawler type because he knows that they have the reliability and pull to get there.

The powerful twin crawlers of the Bates Steel Mule grip any soil with a firm hold so that the heavy duty, valve-in-head kerosene motor need not waste an ounce of its power in uncertain traction.

*The progressive dealer in your neighboring town may write us tomorrow for your territory. If you are a better man, why not write today?*

**JOLIET OIL TRACTOR CO.**  
432 Jackson Street Joliet, Illinois



**Rating  
12-20**

**~The most efficient  
tractor in America~**

# The Needs of War Have Brought Road Improvements to a Halt



The range of use of any motor car will necessarily be restricted unless it is equipped with the

## **\*Hartford** **SHOCK ABSORBER** *"Makes Every Road a Boulevard"*

Every rut and bump, every little irregularity of road surface, hardened by the frost, will have their presence emphasized.

Those who must use their cars this winter—and their number is legion—will appreciate the shock-absorbing, mechanism-protecting qualities of the Hartford Shock Absorber; its ability to carry a car over even the roughest, hardest roads with the maximum degree of passenger comfort and with maximum protection to tires and parts.

Reinforce and improve the function of your springs with Hartford Shock Absorbers and thus make ready for strenuous, rough-road, winter motoring.

Your car's looks are improved; its protection is assured, as soon as you equip it, front and back, with this strong, hand-ome, flexible safeguard. Made of substantial spring steel. Well nigh indestructible.

**Hartford**  
**BUMP ABSORBER**  
—more than a bumper

Send for and read "Every Phase of Motoring." Free.

Prices—5 Sizes: \$60, \$50, \$40, \$30; Ford, \$22.50

**Edward V. Hartford, Inc.,** 142 Morgan Street, Jersey City, N. J.

Makers of the famous Hartford Auto Jack and Hartford Bump Absorber

BRANCHES: New York Boston Chicago Kansas City

Distributors in Principal Cities

Dealers Everywhere

If you do not know how superior "the jack that Hartford built" is to the ordinary kind, it's because you have never tried it under your car. Ask any Hartford dealer. He'll let you try it. Note its strength, stability, ease of operation and exceptionally fine appearance.

**Hartford**  
**AUTO JACK**

SINCE 1899

# POLACK

TRUCK TIRES  
WORLD'S STANDARD

## Are You?

Are You—The Dealer of *Vision*?  
 Are You—The Dealer who looks *Ahead*?  
     —Or the Dealer who looks *Behind*?  
 Are You—The Dealer who *Acts*?  
     —Or the Dealer who *Hesitates*?

### 400,000

Trucks registered in 1917 (More in 1918).  
 Less than Fifteen established standard Truck  
 Tires on the market.

Are you the Dealer of *Vision* enough to see in these figures the business-building possibilities in to-day's opportunity in Truck Tire Sales. Or are you the Dealer who waits, only to find that you waited too long—that while the other Dealer looked *Ahead*—you are now looking *Behind*, wishing you had *Acted* when you were *Hesitating*? Are you?

Act now—as Dealers of *Vision* are already doing. Protect your territory while you can—on an old, established, high grade, stable Truck Tire like the Polack.

To Dealers of *Vision*—Dealers who know the value of an old-established line—who know that nothing counts so much as the *Assurance* of known quality in the goods offered their trade—*Polack Truck Tires* have a special appeal.

*Don't delay—open territory for Polack Truck Tires  
 will not last long—Write or wire us at once*

POLACK TYRE & RUBBER CO.

1876 Broadway

New York

STABILITY  
ENDURES

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

The Class Journal Co.

U. P. C. Building, 231-241 West 80th Street, New York City  
 Horace M. Swetland, President  
 R. I. Ralph, Vice-President E. M. Corey, Treasurer  
 A. B. Swetland, General Manager

**Business Department**  
 Charles B. Shanks, Manager

**Editorial Department**  
 David Beecroft, Directing Editor  
 Ray W. Sherman, Editor  
 Stanley P. McMillan, Managing Editor  
 J. Howard Pile

## Branch Offices

Chicago—Mallers Bldg., 59 East Madison St., Phone Randolph 6960  
 Detroit—95 Fort Street, West, Phone Main 1851  
 Cleveland—Guardian Bldg., Phone Main 1142

Subscription, Per Annum (Postage Paid).....\$2.00  
 Foreign and Canadian Subscriptions.....4.00  
 Single Copies (Postage Paid).....10 Cents

## Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to MOTOR WORLD.

Cable Address, "MOTORWORLD," New York

Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 248 West 80th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. C. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
 Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

Pittsburgh Show Brings Business Back .....	7
Back to Business .....	14
Making the Truck Owner A Booster for You ..	15
Editorial .....	16
Reilly on Roughing Your Own Road .....	17
Winter Business .....	18
Legal Department .....	20
Letters from Readers .....	21
Keep Your Dealers Up and Going .....	23
Radiator Anti-Freeze Solutions .....	24
Repairshop Shortcuts .....	26
Automotive Equipment .....	28
Sell Repairs Intelligently .....	30
Retail News .....	34
Regular News Department .....	35-40
Coming Events .....	40
Specifications .....	41-44

Advertisers' Index on Pages 110-111

# "NORMA" PRECISION BALL BEARINGS

(PATENTED)



The national emergency demands, as never before, from men and from mechanisms, the capacity for super-effort. And under the stress of service the weak and inadequate fall by the way, while the capable come into their own with greater credit, greater recognition.

War-time demands find **"NORMA"** Ball Bearings, in ever-increasing numbers, meeting every emergency in the high-grade ignition apparatus and lighting generators used on cars, trucks, tractors, power boats and airplanes in both civil and military service, in America and abroad.

*Be SURE—See That Your Electrical Apparatus Is "NORMA" Equipped*

**THE NORMA COMPANY OF AMERICA**

1790 BROADWAY

NEW YORK

*Ball, Roller, Thrust and Combination Bearings*



## Is It PRICE or PERFORMANCE that a Motorist Wants?

ONCE IN A WHILE we meet a dealer who says, "Yes, I know that "X" Liquid is a Scientific Process for repairing leaks and improving the cooling system. But I have to sell 'dopes' at 50c because some of my customers won't pay \$1.50 for a good product."

In practically every such case we soon learn that this dealer *doesn't know his trade*. He's underrating the intelligence of his customers!

The experienced car owner today knows that when he uses a "dope" he is gambling with the efficiency of his cooling system. It's no secret that radiator cements, flaxseed meals, powders, etc., invariably clog the water passages.

The motorist who doesn't know *ought to be told*. He will thank you for telling him. And while "X" costs more than "dopes," it is the *only* method of repairing without weakening the cooling system.

\* \* \*

In using "X" Liquid a car owner has positive assurance that he is doing the job *scientifically*. He saves himself much time and considerable money. He knows that every leak will be repaired properly and permanently in 10 minutes. And if he keeps "X" Liquid constantly in the water he will *never have another leak* anywhere in the cooling system.

What is more remarkable is the fact that the same "X" Liquid that repairs leaks also *loosens* the rust and scale that is present in the cooling system. And without additional cost the car owner gets protection against future rust or scale. *Neither rust nor scale can form so long as "X" Liquid is kept in the water.*

A product that *can't* make good for the motorist *won't* make good for the dealer. The selfish interest of every dealer demands that he sell a product that *makes good on performance*. That's why over 20,000 dealers have now lined up with "X" Liquid. Many of them have *given up* cements, powders and such "dopes"—and sell "X" Liquid *exclusively*. They know that "X" is the *only* Scientific product that repairs leaks permanently—and makes cooling systems LEAK-PROOF — RUSTPROOF — and SCALE-PROOF.

It's easier to sell a scientific product like "X" Liquid at \$1.50—than it is to sell a harmful preparation even if it is cheap in price.

It costs the dealer just as much to handle one sale as it does the other. With no extra expense the dealer's profit on a sale of "X" Liquid is three or four times that of a can of "dope." And "X" Liquid can be sold to *every* car owner who enters the store—particularly those careful owners who are dead against "doping" their radiators.



### Get this Special Assortment!

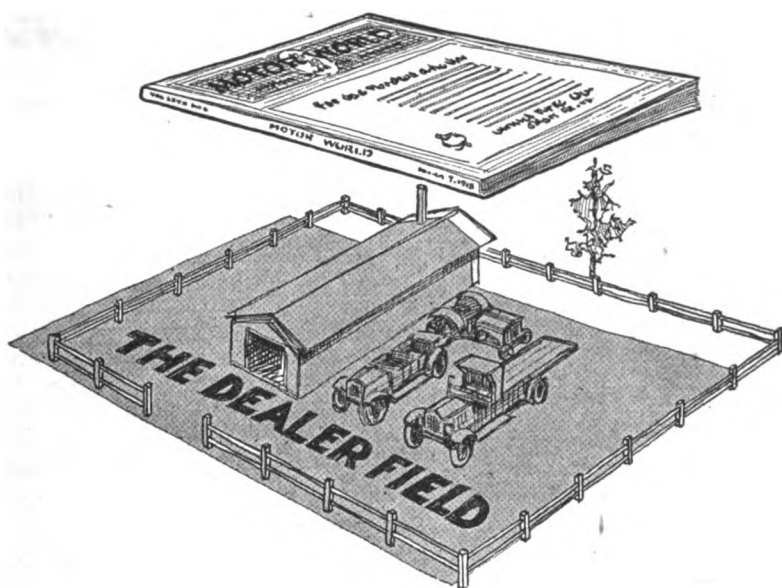
Order the EXTRA PROFIT Assortment. It's a fast-selling money-maker. Consists of twelve Ford Size cans and six Standard Size cans. Regular cost is \$12. Retail for \$19.50. In addition we include a \$1.50 can—FREE.

Get this EXTRA PROFIT Assortment from your jobber—or write us direct—today.

"X" LABORATORIES, 638 Washington St., BOSTON, MASS. ■  
Pacific Coast Branch: 433 Rialto Bldg., San Francisco, Cal.

**"X" Liquid** makes all water cooling systems  
LEAKPROOF-RUSTPROOF-SCALEPROOF





## Covering the Field

In the dealer analysis by States, as presented in the Oct. 30 issue of Motor World, the total for the 47 States and the District of Columbia was 27,527.

The paid circulation of Motor World in the 47 States and the District of Columbia is 22,514.

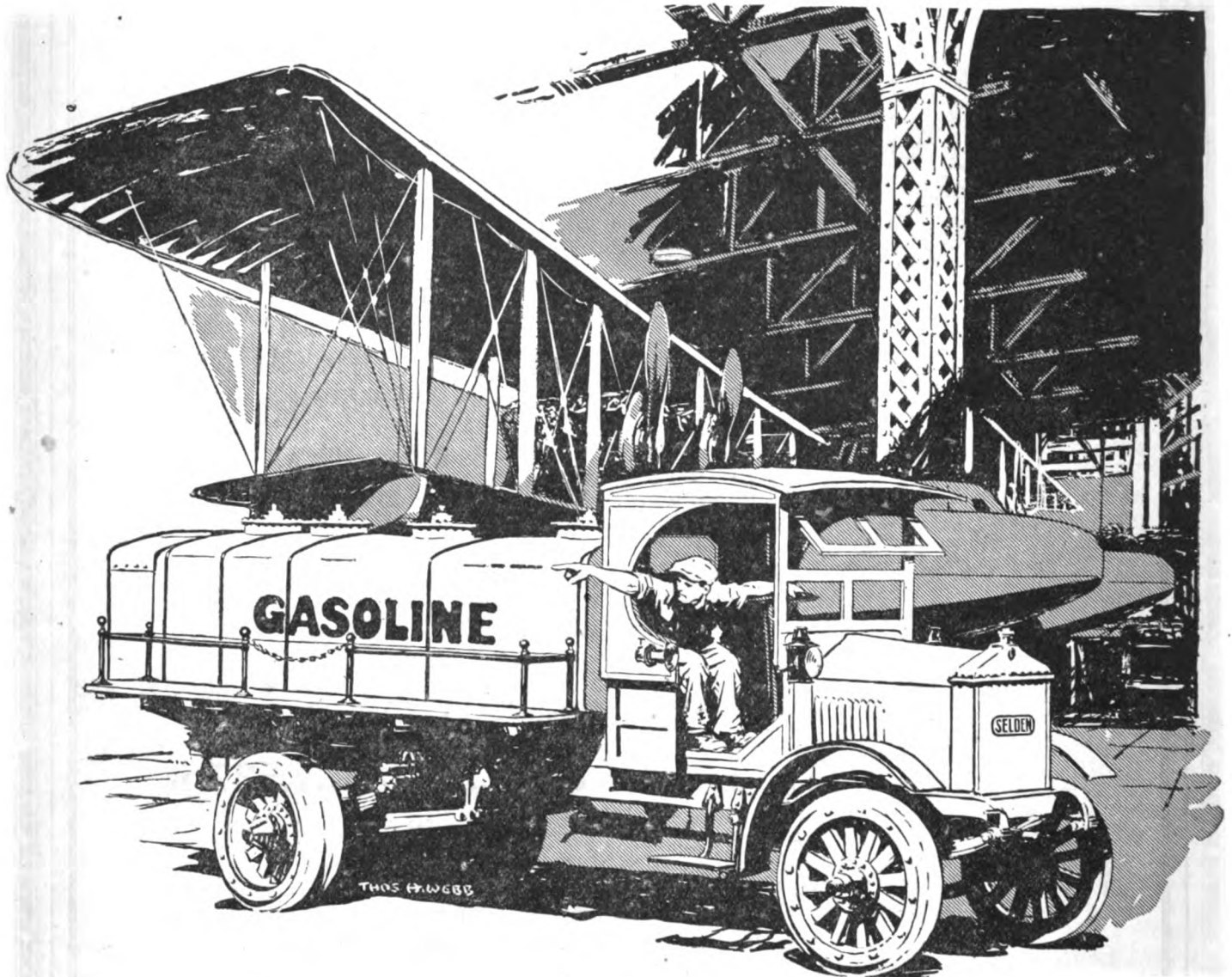
**The relation of 22,514 to 27,527 is  
81 $\frac{4}{5}$  per cent.**

With pardonable pride we call to the attention of our subscribers the fact that where a business paper is over 60 per cent efficient it is most unusual.

But our circulation is in excess of 22,514. The news stand sales, checking copies to advertisers and advertising agencies, etc., bring the total circulation to slightly in excess of 25,000 copies per week.

Motor World is edited exclusively for dealers, jobbers and garage owners. As a helpful influence to the trade it has been good in the past. We shall miss no opportunity to make it of greater constructive value in the future.

# Selden Trucks



To meet the Nation's war-time demands requires more than usual construction in a motor truck. Greater carrying capacity, greater speed and greater powers of endurance must be there—all these with low cost of operation and maintenance.

**SELDEN TRUCKS** are meeting these unusual demands of the Nation at home, of allied Nations abroad, and of a host of commercial institutions at home and abroad that are profiting daily by their use.

One to Five Ton Worm and Internal Drive Models. Write for full information.

## SELDEN TRUCK SALES COMPANY

ROCHESTER, N. Y., U. S. A.

When writing advertisers please mention Motor World—it identifies you

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, November 20, 1918

No. 8

## PITTSBURGH SHOW

### *Brings Business Back*

*Sales Follow First Publicity as Buyers Come from Cover—  
Pittsburgh's Affair Indication of What  
Shows Mean to Industry*

By Ray W. Sherman

PITTSBURGH, Nov. 19—The first show to be held in the United States since the Government ban on shows was lifted is being held in Pittsburgh this week.

Naturally, what everyone wants to know is the manner in which the shows are "coming back" and the effect they will have on business.

As to the first point—how the shows are "coming back"—the answer is that, judging from the show here this week, they can be made the most successful shows we have ever had.

As to the effect on business, the results are good. From the first day that show publicity, although in small quantity, appeared in the papers, sales began to pick up.

Until the show came along business generally had been very slack. But now it is beginning to come back, and more than ever it appears that shows are greatly needed during the winter months to give business the tonic it needs for a good spring start.

#### The Same Crowd, Too

The public is coming to the show just the same as it always did, and it is looking at the cars just the same as ever, and dealers are smiling in the same old way and telling of the good sales they have made—which are both a surprise and an encouragement.

There are two things that are helping business. One is the signing of the armistice and the news of peace. The other is the show. Offhand one might be inclined to assert that all this busi-

Automotive Section THE PITTSBURGH PRESS. Automotive Section  
The GLORIOUS DAWN OF VICTORY  
SEVENTEENTH AUTO SHOW  
NOV. 16 TO 23 - MOTOR SQUARE GARDEN  
Auto Show Number -

*It seems good, doesn't it, to see a page spread like this? This is the way one of the Pittsburgh dailies got behind the show*

## The Problem of Labor

**PITTSBURGH, Nov. 19**—If Pittsburgh employers knew where to get labor they would be happy.

And if labor—especially colored labor—knew more about mathematics it would be happier. It is happy now because it doesn't know how little it knows.

Manager John J. Bell of the motor show has to pay \$5.50 for 8 hours for colored porters, which is 69 cents an hour—almost.

And the porters all declared they wouldn't work overtime unless they got 60 cents an hour, which is 9 cents less than the regular rate.

And speaking of porters—since Eddie Bald lost his old-time colored porter a year ago he has had 22 porters. He used to pay \$10. Now he says he pays from \$18 to \$23 and would pay \$25 if he could get a good one.

ness stimulus is due to the armistice, but an analysis of the situation shows that, while the armistice is a big factor, the show is also a big factor.

The armistice was signed Nov. 11—and then came the big celebration. But the first mention of the Pittsburgh show appeared in the newspapers Monday, Nov. 4, and it may or may not be a coincidence that the next day the Scripps dealer sold three cars. And that same week the Oakland dealer sold three coupes. And this was the week before the armistice was signed and until then business had been dull.

### Show a Real Tonic

Everybody brightened up and the sun began to shine along the row when the show began to be talked about. Buyers began to come from cover, salesmen regained their old-time spirit and things began to move. There wasn't any more buying power than there had been before, there was no particular drive in selling; the effect was psychological. Talk of the show gave trade a much needed tonic.

And when the armistice was signed and the lid went off with a bang the effect was still more pronounced. Tuesday, the day after the armistice celebration, five men walked in to see W. W. Bennett, the King dealer, and asked if he had any good used cars. They said they were ready to buy now that it seemed assured they wouldn't have to go to war. He sold fifteen cars in four days last week.

The stimulating effect has also been felt out throughout the territory. Bennett's dealer in Newcastle reported sales and began to ask about more cars. The dealer in Uniontown did likewise.

And Saturday night at the show, when little business is expected, Bennett sold a King car to a prospect who until he strayed into the glamour of the show had been somewhat lukewarm.

Tuesday a dealer went in to see his banker. The banker was somewhat inclined to sit tight—which is the

banker's favorite indoor sport—but the banker did enthuse enough to tell the dealer that there should be a ready sale for ALL the cars the dealer can get. All of which prompts the dealer to believe that he can get money to take up cars when he needs it.

To a casual reader of Motor World the fact that the Pittsburgh show is being held this week may seem like quick action on the part of the Pittsburgh dealers. Last week Motor World told about the lifting of the ban on shows and the assurance given to President E. E. Peake, of the National Association of Automobile Show Managers, by the War Industries Board that the dealers could go ahead. And this week we are telling

## Automobile Makers Led in War and Now Lead in Peace

"Automobile makers and dealers did as much as any other class to win the war. This was expected, for they have always done big things.

"When the war began they directed all their energies and money toward the defeat of the Hun by meeting every demand of the Government.

"They produced cars to fill the needs of the Government and furnished men to bear arms. Outputs of factories were turned over to the Government. Automobile men proved their right to places with the greatest American citizens.

"With the war over, they are devoting the same energy and all of their resources to meet the peace demands of the nation and the world.

"The show at Motor Square Garden this week is one of the results of this expenditure of energy. Manufacturers and dealers see the demand of the American people and are meeting it.

"The automobiles, trucks and accessories displayed at the Garden show that manufacturers and dealers are as usual

the story of the Pittsburgh show—the first to be held after the lid lifted.

But the Pittsburgh show had been scheduled long ago. Plans had been made before the War Industries Board issued the ban. Wherefore, it was a question of drop the nearly completed job or go through with it in the best way possible. The dealers—most of them—decided to go ahead.

They felt that the trade needed the show but they didn't want to seem unpatriotic, so they turned it into a War Relief Work benefit, and are giving the profits to war work. One of the largest spaces is used by the Friendly Girls Society, which is selling coffee and hot dogs for the war relief fund.

This change in plan necessitated a change in date. The show was originally scheduled for last week, but at the request of the war relief organization it was shifted over so that the show begins as the War Relief campaign is closing.

And then, just as everything was ready for going ahead, the armistice came and the lid was off. Wherefore the dealers have begun to advertise again, and it looks like the good old days before Wilhelm got naughty.

The advertising and the Sunday supplements in the newspapers are like red liquor to a freezing man. It had a fine effect. Until the show opened there hadn't been much advertising of the show or of anything else along the row. But last Sunday the newspapers came out with their old-time automobile sections and got behind the back-to-business movement in a fine way.

Several of them gave the show front page stories, and the Sunday Leader on its front news page carried a bold face single-column box which said:

more than meeting the demands made upon them.

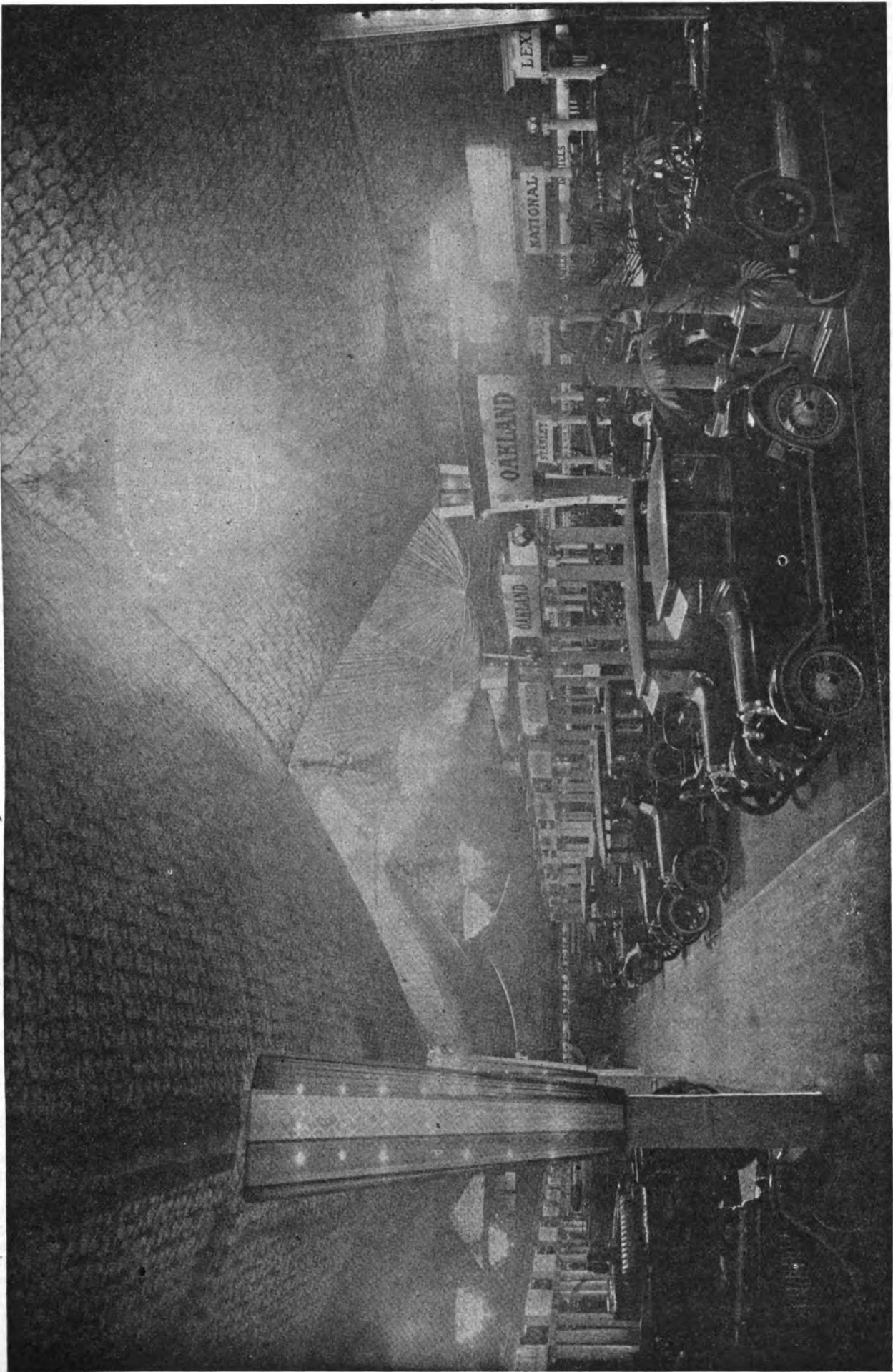
"It is necessary to go to the show to keep up with the strides of this remarkable industry and its captains."

And if that isn't a fine bit of newspaper backing and a clever little eulogy of the automotive business and its people there is a chance for some one to produce a better one. Who's next to try it?

The Sunday Press had the finest job of the lot. It turned out a real section with a tan-ink front cover with a heading: "The Glorious Dawn of Victory." The cover is quite military. All the dealers are speaking well of L. Herbert Smith, the automobile editor, who got up this section. It is fine backing on the part of a paper for a business that has always produced big copy in the past and which will produce bigger copy in the future—and this bigger copy will come that much quicker if the newspapers give their support early.

AS THE TRADE TURNS BACK TO BUSINESS IT BEHOVES THE





*The old names, the old familiar atmosphere, the same throngs of people, lights, decorations—all are there. One look is enough to hitch the past to the future in the public mind and convince it that the good old industry is still here*



WISE AUTOMOBILE EDITOR TO GIVE THE DEALERS MORE SUPPORT THAN THEY GIVE HIM, BECAUSE THIS WILL MAKE IT POSSIBLE FOR THE DEALERS TO COME BACK FASTER AND REPAY THE AUTOMOBILE EDITOR'S EARLY BACK-TO-BUSINESS EFFORT. IT IS A TIME FOR EVERYBODY TO HELP ALL HE CAN.

It would also seem appropriate for every dealer to set aside as ample an appropriation as he can for use during the next three or four months and to do as much advertising as possible. *Advertising did a great deal to create the automobile industry—and it can bring it back.*

#### Shows Should Be Beautiful

There should also be as much warmth and beauty as is possible in this winter's shows. The nation has gone through a depressing period. It has seen the somber side of life. *The shows will be more cheering if more dealers will put rugs, art lamps and flowers in their exhibits and if the decorations are bright and cheering. Brightly colored cars also will help.*

In the Pittsburgh show there are quite a number of such exhibits and the general effect is good. Rugs are used even in truck exhibits, and the effect is surprising. Trucks can stand merchandising atmosphere just as well as passenger cars.

**AND FORGET THAT "PLEASURE CAR" THING. LOTS OF PEOPLE STILL USE THE TERM.**

There will also be room in all future shows for more intensive merchandising. The trade has made progress along these lines and can make more money for itself if it will go still farther.

It is regrettable that Pittsburgh hasn't a bigger show building. Motor Square Garden won't accommodate all those who want to show. In fact, few show buildings are big enough.

#### Why the Dealers Are In

There are a number of Pittsburgh dealers who are not in, which is due to two reasons. The first reason is that, at the request of their factories, they declined to support the show. Some of them wanted to come in—but didn't. Wherefore trucks were admitted freely, all of which is a fine thing because *trucks should be a major part of this winter's shows, even if they have to be put on as a separate show the following week.* The result is that Pittsburgh's show is quite an automotive exposition.

But when the dealers who didn't support the show saw it was going to go on they began to warm up, and when the lid really lifted they applied for space. But there wasn't a foot left and the result is that some of the best known dealers and cars are not there. Some of them are advertising as usual during show week, and the truck people are doing considerable publicity work.

The effect of the show, however, is felt by all the dealers, no matter whether they are in the show or not.

## ON WITH THE SHOWS

**T**HE motor car industry has been slowed up. Factories have been engaged in other work. The public has been taught to save and not to buy, even when it had the money to buy with. There must be a re-education of the public. It must be put back into the thoughts of peace and purchasing. The motor car industry needs a stimulant to send it speeding on the pathway to bigger business. **WE NEED SHOWS.**

The directors of every dealers' association in every city should get together at once on this question and decide to hold a show and then hunt up a building.

Get busy on this work at once. The later in the winter the better for the shows, because the nearer the shows come to the selling season the more beneficial they will be.

The truck business needs shows to make it go faster than it's going now.

The tractor business needs shows to sell the tractor idea to the public.

The National Association of Automobile Show Managers, representing 35 dealer shows—all the big ones and some of the smaller ones—will meet November 25 and 26 at the Hollenden Hotel, Cleveland, to plan show circuits and to make arrangements for this winter's shows.

#### WE NEED SHOWS.

The ban on shows has been lifted. Let's all go ahead—FAST.

There is an accessory exhibit by several of Pittsburgh's jobbers, although there isn't space enough for many accessory people. The Lalley Light man is here and says the device is going fine with the motor car dealers in this section. One of his road men went out with a dealer the other day and closed four sales before 11 o'clock in the morning.

#### Correct This Impression

As to the cars on display, there is nothing that is new or startling. A few misguided prospects have an idea that the trade will be flooded with radically new and cheaper cars as soon as production resumes, and one of the jobs of the dealers is to correct this impression and show the public that the cars that will be sold for some time yet will be the ones that have been made for the past season. *New stuff cannot be expected right away.*

The Sunday papers carried interviews and stories to correct this false impression. *The plan should be copied in connection with every show.* These stories stated that the public's buying ability will snap back quickly, now that the war is over, but that production can't come back with a corresponding speed. *The result will be that the man who waits for something marvelous or a lot cheaper may find himself sitting by the roadside next July watching the hot-day recreation of those who bought this winter when there were cars to sell.*

The dealers here have cars, but few if any are overstocked. An energetic selling effort should speedily clean out any dealer's stock. Also, the sooner a dealer is sold out the better, because his profit is better the sooner it is made, and it will do no particular harm if he is short of cars when spring comes. That is: If he has 50 cars now and can get

100 more by April 1—and no more—he might just as well clean out his 150 and have it over with and get the profit in the bank. It will save him having to contend with the competition which, obviously, will be greater a little later.

Despite the fact that manufacturers say they can't get back to 100 per cent for nine months some disturbing things are likely to happen. Take one example. Here is Factory A with a normal output of 18 cars a day. It has been at low ebb. But it has some unassembled stock on hand.

#### This Is Possible

By returning to peace-time work and using up what it has on hand it can shoot back to an output of 13 cars a day by March 1. *This may cause people to believe Factory A is going to slide up to 100 per cent production by May 1. But here comes the hitch:*

When Factory A gets rid of the unassembled parts it has on hand it must get new parts. Let us say it has been getting four of a certain rear axle and using nine of its stock on hand, making its 13 cars a day. When the stock on hand is gone it must get from 13 a day and up from the axle maker to keep its production curve ascending toward normal—and this is likely to—and probably will be difficult.

The result may be that, while Factory A seems to be shooting back to 100 per cent production at a rapid rate, it may go up like a skyrocket for a few months and then come down like a burnt stick right in the middle of the big selling season, from which point it will have to start all over again on its upward climb. Wherefore buyers should buy early and dealers should sell and stimulate selling—for the following reason:

There seems every probability that there will not be any over-supply of cars this summer—but a profit is a profit, and the one sure way is to sell now and want cars later rather than to hold a reserve supply for too long a time. But don't cut prices.

Instead of planning on a good summer and saving cars, sell now and have a good winter—and maybe a fairly good summer too.

There were rumors Saturday night of the drop of \$300 in the Cadillac, and it created some commotion. Everyone wondered if all prices would fall and where the dealer would have had stock on hand at the old prices. With the Government considering a minimum price on steel for the coming months in order to stabilize business, the car makers should operate along similar lines and let prices down slowly. When the public knows there has been little or no drop in materials or labor as yet it is likely to wonder if sudden drops at this early date in the price of cars may not be due to a higher price than was necessary during the war.

### Some Dealers Over-Stocked

Manufacturers should give heed to the condition of dealers. In some sections—but not here—dealers are heavily over-stocked. Such sections should be given a chance to get from under before the factories begin to fill those sections with cars that aren't needed. A slow return to normal by the factories in both price and production is far better than a rush with reason. The National Automobile Chamber of Commerce should weigh this situation carefully.

All these facts, taken in connection with this week's show, indicate certain things: One is that dealers should put on shows and make them as good as possible.

Dealers should at once begin their advertising and sales activities and sell as soon as possible.

The shows and all this sales work may cause the supply to be considerably less than the demand, but it is a healthy industry in which there isn't enough product to satisfy the public. When supply exceeds demand profits have to come down and the trade weakens. Keep up the demand.

### Wide Publicity Essential

The shows should be given wide publicity. The crowds at the Pittsburgh show would be better if there had been more advertising, and there wasn't more advertising because of the conditions during the weeks preceding the show. The lightless ban is lifting here, but Manager John J. Bell could not get permission to cover the outside of the Garden with lights as in previous years.

Everything points to a good season ahead. There seems no reason to worry about stocks at high prices, provided the stocks aren't abnormal. But the same conditions prevail now that prevailed when the industry went into war. The man who economized and got on a war basis earliest was best off. The man who resumes activity and gets on a peace



Like her! This is the new uniform that the government has designed for women workers in the various arsenals where women are doing a lot of the work men did before the war. She can wear puttees if she wants to with this well-fitting rig

## Take Precautions for Winter Driving

By Following Suggestions Considerable Trouble can be Avoided

- 1—Put anti-freezing solution in the radiator
- 2—Get a radiator and hood cover
- 3—Drain out old oil in crank case
- 4—Adjust brakes and steering gear
- 5—Use a softer grease on chassis parts
- 6—Get plenty of heat to the carburetor
- 7—See that storage battery is fully charged
- 8—Keep the car in a heated garage
- 9—Carry good tire chains
- 10—Have tires properly inflated

IF YOU HAVEN'T TIME TO PROPERLY TAKE CARE OF YOUR CAR, LET US DO IT

## Whitewater Garage

Dewrey & Gatzig

How one garage is helping its patrons to get comfortably through the Winter season. This is an ad in a daily paper

basis first will profit most—and soonest.

There is talk here of doing away with some of the War Service Regulations of the National Automobile Dealers' Association. All concede that cash—or its equivalent—is a good thing in the shop, but many would like to go back to keeping the salesroom open evenings and to a few other broadened activities. Of course, with the war over a dealer can do as he wishes on any of these points. His better business judgment should be his guide.

### Spring Show Coming

So beneficial is this week's show that the dealers are now looking forward to a spring show at the beginning of the selling season. Spring shows and many other things will be considered next Monday and Tuesday in Cleveland by the National Association of Automobile Show Managers, all of whom are deeply interested in what is happening in Pittsburgh this week, where the dealers have taken cars from stock without any new cars from the factories and gone ahead in the old-time way with old-time success.

The Pittsburgh show has shown the public that the industry is still here and that, now that the war is over, the dealers don't propose to sit on a cracker barrel and talk about it but are going BACK TO BUSINESS.

### EXHIBITORS AT PITTSBURGH SHOW

#### CARS

Averman-Lynn, Inc. .... Chandler  
Auto Trading Co. .... Elliot  
Bowdoin Motor Co. .... Velle  
Bennett Motor Car Co. .... King  
Eddie Bald Motor Car Co. .... Hudson  
Bishop & Porta, Inc. ....  
Detroit and Milburn electrics  
Davidson-Hollahan Co. .... Saxon  
Franklin Pittsburgh Auto Co. .... Franklin  
Hiland Auto Co. .... Peerless and Dodge  
Eichelberger-Reed Co. .... Columbia  
B. W. Lemmon Co. .... Oldsmobile  
May-Keleher Co. .... Pierce-Arrow  
E. A. Myers Co. .... Missel  
Pittsburgh Mercer Co. ....  
Mercer and Lexington  
National Pittsburgh Co. ....  
National and Stephens  
Nash Pittsburgh Co. .... Nash  
Packard Motor Co. .... Packard  
Pittsburgh Apperson Co. .... Apperson  
Pennsylvania Motor Co. ....  
Oakland Pittsburgh Co. .... Oakland  
Mohr Motor Co. .... Scripps-Booth  
McKinnley-Gregg Co. .... Daniels  
Stanley Steam Car Co. .... Stanley  
Samson Motor Co. ....  
Maxwell and Chalmers  
Winton Motor Co. .... Winton

#### TRUCKS

Acme Truck Service Co. .... Acme  
Bennett Motor Car Co. .... Tower  
Galonot Motor Sales Co. ....  
Dearborn, Parry bodies  
May-Keleher Co. .... Pierce-Arrow  
E. A. Myers Co. .... Clydesdale  
Packard Motor Co. .... Packard  
Pittsburgh Fulton Truck Co. .... Fulton  
Steel City Motors Co. ....  
Bethlehem and Service  
Samson Motor Co. .... Federal  
Universal Auto Sales Corp. .... Master  
E. J. Thompson Co. .... Bodies  
Pittsburgh Motor Service Corp. ....  
Gramm-Bernstein and Dav-Elder  
H. Kleinhans Co. .... Sterling

#### AUTOMOTIVE EQUIPMENT

Jackson Motor Supply Co.  
Doubleday-Hill Electric Co.  
Pittsburgh Auto Equipment Co.  
Miller & Woodward, Inc.  
Doubie Seal Ring Co.  
Pittsburgh Indemnity Exchange.

# THE NEW

## What You Must Do and Be Competition That Is Going

### *BACK TO BUSINESS—*

**O**UT on Long Island there is a garageman whose brother is in the army. The stay-at-home brother is taking care of the business. He is the business man of the pair. The soldier brother is the mechanic. They have always done a fair business. From now on they are going to do more.

The stay-at-home brother has the grounds all marked out in his mind where he is going to plant grass and flowers and lay out walks and drives in front of the garage—when his brother comes back.

He is figuring on some new shop equipment.

When they get back into the spin of things they are going to give that part of the world some real competition such as it never had before. The people who patronize this garage like this sort of business. They will come to it in droves. The looks of the place will draw them.

*These men typify* THE NEW BUSINESS.

**I**N a recent issue of Motor World was a letter from a man who used to manage a used-car department on the Pacific Coast. He went to war—at his own request.

He said: "When I return from Berlin I will go into the used-car business again because it is the best business there is when it is run as it should be run."

Before he went away he netted a clean profit of 10 per cent on every used-car he handled. He made money on what thousands of dealers call the "used-car problem."

*He typifies* THE NEW BUSINESS.

**A** KEEN, far-thinking business man—who is one of the newer successes in motor car manufacture—talked of what's going to happen in the automotive trade.

He said: "It is surely going to happen that there is going to be a revision of the trade. The dealers and garagemen who stay with us are going to be those who sharpen up their minds to meet the new competition.

"The less efficient will be weeded out. We are going to have men who know how to sell things, not hand them out to people who demand. There is going to be more of the business man and less of the mechanic in the businesses that survive the new period."

*The men of whom he spoke typify* THE NEW BUSINESS.

**L**AST week Fred Vesper, who is president of the National Automobile Dealers' Association, and who knows more about dealers than the dealers themselves, talked over a lunch table in New York about what's going to happen.

As plain as the sunrise in the morning he can see that the trade is going to be changed, that the unfit shall pass away and the fit remain, that new methods shall replace old methods and that men of thought and business ability—whether inherent or acquired—will be the men who will answer "Here" a decade from to-day.

*Will you be part of* THE NEW BUSINESS?

# BUSINESS

## If You Would Meet the to Demand Strong Men

### *-AND START RIGHT*

ON pages that follow you will find a story of how a Denver dealer has gone into the fundamentals of repairing. He has found how to make an estimate on a repair job that is fair to the customer, that avoids dissatisfaction and that makes it possible to collect repair bills of \$600 and \$700 without dispute—and at a profit.

He spent two years analyzing his business and finding out what he wanted to know. He has studied his business. He will study other problems as they arise. You should read his story and get his spirit and his methods. He will be with us in the future—for *he typifies THE NEW BUSINESS.*

ALL over the world we are going to have A NEW BUSINESS. It is as certain as that grass grows and that water runs down hill. We are coming into an era of new thoughts and new minds, of new methods and of harder but faster pathways to success.

From out of the country crossroads of America thousands of narrow-minded boys have been bodily taken and transformed into world tourists. They have seen more of the world and of life in a year than the average big city man ever sees in a lifetime.

They are coming back with new ideas and new ideals. They have been taught spizz and initiative, order and progress. They will never be the same men again—and the world will be better for their return to business life.

*They will create A NEW BUSINESS.*

THE recent months have sold the world on the idea of more transportation. The war has MADE the motor truck and the tractor. These things MUST BE SOLD. The dealer who handles them must SELL THEM and not fuss with them.

In every section there will arise great automotive dealers, leaders in their communities, who will have car departments, truck departments, tractor departments, farm-light departments, service departments and accessory departments. These leaders will be great managers, even in their small ways. They will sell more cars than ever before, and with them they will sell other things that they never sold before at all.

There will arise centers of automotive transportation and work which will be conducted along the lines of THE NEW BUSINESS.

THERE will be dealers who know their costs and profits, who know whether a profit exists in a discount of 20 per cent, who know why they lose money and where, and where they make it and why. The dealer who stays with us will be an accountant, or he won't stay.

The day of hey-day and luck has gone. *We are entering the era of THE NEW BUSINESS.*

IN future issues Motor World will tell the stories of these NEW BUSINESS dealers, for there are quite a few in the trade. Give heed to their counsel. Gather from them all the NEW BUSINESS ideas you can. Trim your ship for the big race. Cast overboard the deadwood. Become a thinker, an analyst, a man who knows, a candidate for the gallery of success, a traveler with the FIT.

*Be a part of THE NEW BUSINESS.*

*A Message from F. W. A. Vesper, president of the National Automobile Dealers' Association, to Motor World readers*

# THE TEST OF THE LEADER

Have You Ever Considered the Extent to Which Your Success with Farm Light Is a Mark of Your Ability?

**F** W. A. VESPER, who is president of the National Automobile Dealers' Association, and who distributes the Buick in the St. Louis territory, is also a farm-light distributor, which perhaps not many dealers outside St. Louis know. But he is.

He saw the big opportunity in farm light a year or two ago and took the distribution of the Delco Light in a territory of 100,000 farms, handling it through a separate company, which, however, is not unlike a separate department of his major business. However, it is not operated as a side line.

There are four territory men who go out and help dealers, who help develop the territory and who get things started.

Vesper has found that, while a motor car distributing organization is ideal for farm-light selling, there are dealers who can't—or won't—sell farm light even after they get the agency and get a good start. Wherefore he says:

"The motor car dealer who can sell farm light comes pretty close to being the dealer who is destined to big success in the future. By the mere fact that he sells farm light to the farmers of his territory he demonstrates that he has that type of mind which brings success to a man. And why?

"In selling the motor car the dealer has to sell the goods and not the idea. In selling farm light the dealer has to sell the idea first and then the goods.

"In selling motor cars the dealer does not have to originate prospects. They come to him. In selling farm light he must originate prospects, and this requires that ability which marks the leader in a trade. It requires thought and action. It necessitates that a dealer be a keen, thinking man. A dealer can develop this initiative if he hasn't got it, but many of them never even try to get it.

"When we took on the distribution of the Delco Light we gave an opportunity to our dealers to sell the system. Some made good and some didn't. The better dealers made good because they had the ability to go out in a virgin field and sell an idea before trying to sell the goods.

"We have one dealer who has three stores in three different places. We sold five plants to each store and started the dealer going. In the end we had to take back most of the systems. We took back five from one of the stores alone. Then we hunted around and found a man who seemed to be a live one. He had been a lightning rod agent, or a book agent, or a real estate man, or something, I've forgotten what. But he had been used to going out into the country and selling an idea. The result was that he went into the same territory where this dealer had failed, sold a lot of plants and made a lot of money.

"There is a wonderful opportunity for the motor car dealer in farm light. The field is there, waiting for the goods, but sometimes the farmer doesn't know he wants the goods. The dealer must first sell him the idea of farm light and then sell the system. Every man wants a motor car because he has seen thousands of them. But he hasn't seen farm light, so he doesn't know he wants it.

"The big argument is comfort, convenience and lower lighting cost. You would be surprised at the cost of kerosene lamps as compared with farm light. And in this kind of sales work the dealer must be original.

"I remember one dealer who had run his lead from the demonstrating trailer into the kitchen at dusk—which is the best selling hour—and was talking about the light and its advantages. He happened to notice in the next room a boy poring over his school books by the light of a kerosene lamp.

"And," said the dealer, 'do you know that much of the trouble with the eyes of people in the country is due to the poor light of kerosene lamps?'

"'Maybe that's what ails Willie's eyes,' said the mother, who then told of the trouble their schoolboy son had been having. From then on that dealer talked eyes, eyes, eyes and made the sale. That was selling the idea—and not the system.

"We find the use of a trailer a big sales help. The dealer runs it to the farmyard at dusk, gets his lead into the house and shows how bright the light is. He then says he has to come back that way the next day and would rather leave the trailer there than draw it to town and back. He shows them how to turn the lights on and off and how bright it makes the kitchen where the supper dishes have to be washed—by mother.

"But the dealer often doesn't come back the next day. He waits until the day after, and meantime the wife has fussed with the thing and the farmer has become better acquainted with it. When the dealer comes back the third day the sale is as good as made. The farmer has sold himself—or his wife has.

"And after a farmer gets a system he buys all kinds of stuff. It is nothing for a farmer to spend forty dollars on a fixture for his living room. We sell churns, and other things, and pumps, great quantities of pumps for putting water into the house. The farmer puts fixtures everywhere. He lights up the front parlor and from then on he begins to live all over the whole house instead of spending his life in the kitchen and dining room.

"One reason the dealer's success with farm light is a mark of his ability is that some of the farm-light manufacturers are operating along intensive lines. They divide the country into units of so many farms and the distributor divides for his dealer agencies. The distributors go to the factory at intervals for sales conferences where selling problems are analyzed and overcome and every man is made a better salesman.

"The distributor in turn does the same thing. He has conferences of his territory men, and every now and then has a general sales session of his dealers. If the motor car industry were organized along the same intensive lines the factories couldn't build cars enough to supply the demand the dealers would create.

"All of this intensive work means that farm light is going to be sold in an intensive way. It requires the dealer to be a good dealer. If he isn't a good dealer he is not of value in a farm light organization. Therefore, farm light is an opportunity for the dealer in two ways. It gives him a chance to build a big business and makes it possible for him to make a real merchandiser out of himself.

"One thing the dealer should not forget—and it may be a reason some have failed in farm light—is that it cannot be successfully handled as a side line. It must be made a department of the business with some real time and attention given to it. If handled in that way by a man who is willing to work hard and become a thinker and originator it will yield a nice business and a good profit.

"But those who say motor car dealers can't sell farm light are only partly right. SOME dealers can't. Other dealers CAN and DO."



# Making the Truck Owner A Booster for You

## *As to the Trucks:*

- 1—Bring 'Em In
- 2—Look 'Em Over
- 3—Keep 'Em Fit

### ACT I

SCENE: OFFICE OF TRUCK PROSPECT.

DRAMATIS PERSONNÆ: PROSPECT AND TRUCK SALESMAN.

PROSPECT: "John Smith tells me that these Republic trucks don't stand up."

SALESMAN (Is he bothered? He is not!): "What does he say is the matter with them?"

PROSPECT (Sure he has the salesman on the run and will soon get rid of him): "Oh, no special defect in the truck, I guess. But the costs run too high, and it seems to be wearing out rapidly."

SALESMAN (Playing into his hand): "I see. No fault of driver, apparently. No unusual repair bills. But he expects to get stung good and plenty in a short time. Kind of nervous about how he's going to come out. Smith is a good business man, keeps track of costs. Friend of yours. Well, his experience certainly ought to have weight with you. Can't blame you for shearing off from Republics under the circumstances you mention."

PROSPECT (Beaming—salesman can't bring up a definite answer to the general charges. Rather sorry for the salesman's chagrin): "The Republic's a good truck, though—one of the best, in my estimation. Drop in again some time when you are by this way."

SALESMAN (Brightening, and putting on his hat): "All right, I'll do that. Thank you for listening to me. By the way, who is this John Smith?"

PROSPECT: "Grocery jobber; West Twelfth Street."

SALESMAN: "Suppose you'll give me one more chance! Don't buy till Saturday, will you?"

PROSPECT: "All right! No use, though, for you to come back. I've made up my mind."

### ACT II

SCENE: REPUBLIC SALES AND SERVICE STATION.

DRAMATIS PERSONNÆ: SALESMAN AND SERVICE MANAGER.

SALESMAN: "What's the matter with John Smith's truck?"

SERVICE MANAGER (Digging into his files): "Well, apparently the driver is a good mechanic; but careless, and too ambitious. He doesn't clean his spark plugs; he misses too many places on lubrication; he overloads too often, and he is inclined to disrespect for the governor when in a real hurry. Then——"

SALESMAN: "'S'nough. Let me have that report for about fifteen minutes."

(Salesman gets John Smith's permission to use the report in trying to sell the prospect. And—the definite information on just why John Smith's Republic had shown high costs, and why John Smith was hereafter going to find his truck economical, quickly turned the tables with that prospect, and made the sale.)

A. S. Austin, manager of the Republic Sales and Service Co., Kansas City, installed a free inspection service a few months ago. Every Republic owner is entitled to send in each truck once a month on a specified date.

The truck is carefully examined; and more than 70 notations are made as to the condition of the various parts. The report bears also suggestions as to what repairs should be made and what the owner should instruct his driver to do to get the most economical results from truck use. The report is mailed to the owner.

This service was offered to all Republic owners in Kansas City, no matter how old their trucks were. Its primary purpose was to help the owners get their best service from the trucks; and reduce repair and operation costs. But it has proved a valuable aid to the salesmen, in meeting the specific objections of prospects who refer to other Republic owners as having had bad experience.

The service company maintains a card index of all Republic owners in the city,

## Republic Retail Sales and Service Company's Inspection Report

Compression Cyl. 1.....	.....
Compression Cyl. 2.....	.....
Compression Cyl. 3.....	.....
Compression Cyl. 4.....	.....
Valve Seating.....	.....
Valve Adjustment.....	.....
Cylinders.....	.....
Cylinder Head.....	.....
Pistons.....	.....
Piston Rings.....	.....
Connecting Rod Bearings.....	.....
Crankshaft Bearings.....	.....
Front Motor Support.....	.....
Rear Motor Support.....	.....
Starting Crank.....	.....
Fan.....	.....
Oil in Crankcase.....	.....
Intake Manifold.....	.....
Exhaust Manifold.....	.....
Spark Plugs.....	.....
Wiring.....	.....
Magneto.....	.....
Magneto Shaft.....	.....
Carburetor.....	.....
Governor.....	.....
Is Motor Clean?.....	.....
Timing Gears.....	.....
Cam Shaft.....	.....
Water Manifold.....	.....
Water Pump.....	.....
Radiator.....	.....
Clutch.....	.....
Transmission.....	.....
Universal Joints Greased?.....	.....
Steering Gear and Connections.....	.....
Front Axle.....	.....
Front Wheels.....	.....
Front Wheel Bearings.....	.....
Front Springs.....	.....
Front Spring Hangers.....	.....
Front Spring Clips.....	.....
Rear Axle.....	.....
Foot Brakes.....	.....
Emergency Brakes.....	.....
Rear Wheels.....	.....
Rear Springs.....	.....
Rear Spring Hangers.....	.....
Rear Spring Clips.....	.....
General Lubrication.....	.....
Grease Cups Missing?.....	.....
Body.....	.....
Cab.....	.....
Windshield.....	.....
Hood.....	.....
Lamps.....	.....
Storage Battery.....	.....
Wiring.....	.....
Switch.....	.....
Horn.....	.....
Gasoline Tank.....	.....
Muffler.....	.....
Frame.....	.....
Holst.....	.....
General Condition.....	.....
Bolts in General.....	.....
Fenders.....	.....
Run Boards.....	.....
Driver Competent or Not?.....	.....
Truck Overloaded?.....	.....
How Much?.....	.....
General Suggestions.....	.....
Signature of Inspector.....	.....

arranged by days of the month. A clerk examines the index each day and sends to the owners whose dates fall within two days notices that their trucks should be sent in for inspection. The man who makes out the work-orders at the station is the one who performs this inspection.

Usually, the driver watches him going over the truck; asks questions—and is given suggestions on what to look for and how to handle adjustments, lubrication, etc. No repairs are made while the trucks are in for inspection; but in 75 per cent of the cases, where owners are business firms of standing, the trucks come back within two days with orders to make the repairs suggested on the inspection report.

Frequently drivers ask that inspection notices be withheld a day or so, so that they may have opportunity to go over their trucks and so avoid the possibility of a bad showing on the inspection report.

(Continued on page 40)

# Editorial Observation

## Let's

**N**OW that the National automobile shows in New York and Chicago are no longer a possibility, the importance of the local dealer shows looms larger than it ever has before.

There is no real reason why an automobile show should not be as valuable to a community in teaching the necessity for quick transportation and the proper use of the means of transportation, as is a stock show in teaching the breeding and handling of blooded stock.

There is no reason why the person who visits an automotive exposition should not do so with the thought of learning a lot of things about a car or a truck or a tractor or a farm lighting system that will help him get the most out of that piece of equipment with the least expense.

The arrangement of such an exposition would call for treatment only slightly different from the treatment accorded an ordinary show. It should be just as attractively decorated because the public likes to have its pills of learning sugar coated. But the exhibits themselves and the method of displaying them would have to be a little different.

In the case of passenger cars there would have to be a chassis, preferably a cut out chassis so that every part and the relation of each to the other might be plainly seen. There would be a competent lecturer to explain the mechanics of the various parts, the various adjustments that should be made from time to time, and, most important of all, the necessity for proper and frequent lubrication.

In the case of trucks we should have to have one or more persons competent to analyze the haulage problems not only of prospects but of users as well with a view to correcting faulty use of trucks and to getting truck wheels turning in the right direction and under the right loads. Such a person might also

act as an advisor regarding maintenance systems which have proven successful; in fact he must be capable of answering any sort of a question regarding the operation of a truck that is likely to be asked.

The tractor exhibit would look more like a typical farmyard than has any so far. In addition to tractors there would be other equipment operated by tractors such as ensilage cutters, wood cutters, harrows, manure spreaders, etc. No room, you say? What's the matter with photographs? Here, the person or persons in charge must be competent to advise regarding the proper method of attaching the various pieces of equipment, the arrangement of drawbar hitches, the method of plowing headlands, the method of positioning a tractor for the use of belt power such as lining up the pulleys and keeping the proper tension on the belt, etc.

Exhibits of farm lighting systems present no difficulties. They can be shown in operation on city gas, or kerosene. And in this case we must have an expert who can tell those who already own machines how best to operate them and care for them, so that they can get the best out of the machines—and then tell their neighbors how easy it is to operate one so that the neighbors become the best kind of good prospects; for the best advertising, after all, is word of mouth advertising.

So let's make our dealer exhibitions real expositions. Let's sell all the goods we can at the shows and as a result of them, for that is what a show is for. But let's make the benefit more lasting. Let's give the people who come to our shows something more than mere impressions to take home with them. Let's give them some concrete facts that they can take home and put to work.

That's the sort of thing that will make the automotive dealer really solid in his community.

## How About Your Employees and W. S. S.?

**I**T is a generally accepted fact that employees of any company who have been encouraged to be careful in their expenditures, to save their money and to invest it judiciously do *better* work, have *greater pride* in their jobs, and *greater loyalty* to their employers. The United States Government now offers employers an unusual opportunity for the systematic organization of their employees for THRIFT through the founding of War Savings Societies.

**GROUP SAVING** through War Savings Societies bolsters up *esprit de corps*. It encourages economy

in personal and company expenditures. It develops loyalty to company and country.

The organization of a War Savings Society among your employees will be a direct help in winning the war, not only because it helps directly in Government financing, but also it releases men, money and materials for essential war work through the saving on non-essentials.

Perhaps you haven't thought of a War Savings Society for *your* employees in just this way before.

Why not organize a company of savers?

# ROUGHING YOUR OWN ROAD

## *Sales Expenses Come From Sales Resistance* —Question: *Who Creates Sales Resistance?*

By Ray W. Sherman

"—and in the period that's coming the Callawassa dealers have got to be more than they have been in the past. We must have better methods, we must be better dealers and we must make more money with less work."

Whereupon Ben Doyno, the Supplyman, sat down amid the applause from the members of the Callawassa Motor Trade Association who were gathered for the biggest meeting they ever held—for the consideration of "Back to Business—and Start Right."

The Callawassa dealers were thinking. Doyno had arraigned them severely for their methods of past years, when they had ridden on the top wave of prosperity and made a little money in spite of their methods. But now, he declared, they must prove their fitness to survive. For the unfit were going to pass out and the march of progress was going to leave the non-thinking, unmethodical, unsystematic tradesmen in the lurch.

"One thing I've had on my mind," said Reilly, the Sennett distributor, "may seem a minor point to you, but I think it's something that is going to occupy the minds of the keener thinkers in this business as time goes on. I think it is one of the tests of whether a man is a candidate for success in the period we are now entering.

"I refer to the education of our customers to the end that they may give themselves satisfaction with the things we sell them. All the years we have been developing this business we have been carrying a big load of dissatisfaction and have been trying to get rid of the load through expensive service, which has eaten our profits. We have gone at the job from the wrong end and have tried to do the work in the most expensive way. If rightly done—beforehand—it will cost nothing. If done afterward it may ruin a dealer's business."

About which time the dealers began to get interested, for there wasn't a man in the room who hadn't staggered under the burden of trying to keep his owners satisfied.

"Take, for example, the tractors we are selling—and which more of you boys ought to be selling. You can put a tractor in the hands of a farmer and he may kill your business for years to come in his section of the country, simply because you don't teach him how to take care of it. I had to drive all the way out to a farm the other day to pick the chaff out of a radiator. The engine was heating. When I got there there was a big crowd of farmers around con-

demning the machine, but when I began to pick the chaff out of the radiator the laugh surely was on my customer.

"A little thing like that could ruin a tractor's reputation. I hadn't thought of it before. Now I'll teach every tractor buyer to watch out for that trouble. Teaching him to give himself that service costs me nothing—but running out there to take care of the trouble myself cost me about seven dollars. If a minute's conversation beforehand can make me seven dollars after the sale I'll say it's a cheap way to make seven dollars."

"I'll say so too!" declared another tractor dealer.

"The same thing applies to our car business," Reilly continued. "It doesn't apply to tractors alone. How often have we done foolish little things in the way of service and piled up a big service expense for ourselves when we could have avoided the whole expense by a bit of educational work.

"The other day we had to go two miles to see why a new Sennett wouldn't start. The trouble was the customer kept pulling and pulling on the choke until he got the motor so full of gas it couldn't fire. He had been taught to pull the choke so he pulled it and kicked the starter, and when it didn't start he kept on pulling and pulling on the choke and turning the starter until he had the battery nearly empty. A little previous education on how to wiggle his left forefinger would have saved us several dollars.

"I'll tell you, boys, we've been operating along very unscientific lines. We have made our own way hard. We have damaged the reputation of our cars and increased our sales expense out of all proportion to the necessity. It's all wrong. We've got to sell right if we're going to make the money we should, and the regrettable part is that right selling is cheaper than wrong selling, yet we don't do it.

"Why"—and Reilly pointed at Doyno, the Supplyman—"Ben Doyno finds the same thing true in his own business. He started in last winter to sell a lot of anti-freeze, and he nearly ruined his reputation doing it. And why? Simple reason. He didn't teach his buyers how to use it. It never occurred to him that they might not read the directions on the can—but they didn't.

"The result was that our service station got a lot of business and Doyno got a lot of abuse. Now, what was the trouble? Just this:

"The directions on the can, printed as plain as day in twelve-point type, say you must first clean out your radiator with washing soda, flush throughout, then repair all leaks, put in new hose where worn, mix the stuff in a certain amount of hot water, pour it into the empty radiator and then run the motor at once to stir the whole mess up. I've tried it that way and it works.

"I may as well confess that I, too, tried it the other way—and it didn't work. It shorted everything, stifled the circulation system and raised havoc in general. Because I didn't flush and clean out first, the solution did the flushing and cleaning for me and then the leaks and shorting began. No one to blame but myself—you may say—yet I blamed Ben Doyno, and I still blame him.

"Doyno should have found out about that and should have told me that I must follow certain directions or I might get into trouble. He didn't sell me that which would permit me to give myself satisfaction and thereby add to his goodwill and future profits.

"Take this tractor thing again," Reilly resumed. "You can go out through the country and find tractors standing in the fields all winter—and so are the threshing machines, the binders and most of the other machinery. Who's to blame? The farmer? No. He doesn't know any better. Nobody ever called his attention to the fact that the care he takes of his machinery means that much longer service and greater satisfaction. The man who sold him the machinery, and—take it from me, Boys—the care of machinery is going to be one of the big parts of my sales work. I'm going to make the Reilly customers in this territory stand out like an Easter suit in a crowd of bums. My customers are going to be up-to-date if I have to go out and build the first implement house myself.

"And it is that way all along the line. We have been pushing goods across the counter with a fond farewell for the goods and a glad hand for the coin, and then we have wondered why our sales expense was so high. The reason is that instead of building and expanding our businesses we have been spending half our time building a wall of sales resistance and the other half tearing it down. It's a highly interesting occupation, fellows, but it's the wrong dope—take it from me. I know.

"I know, because I'm like the fellow who said: 'Honesty is the best policy. I know—because I've tried both.'"

# Winter Business

*The Dealers in Every Town Should Get Together NOW and Plan for a Late Winter Show.*

## He Does Business at a Crossroads Town in the Canadian Northwest, But He Is Going to Get Winter Business

*If He Can Do It in a Place Like That—*

Editor Motor World: In regard to how I am going to keep my garage on a paying basis this winter and until things become normal again: I intend to **STAY IN BUSINESS** by adding some new lines which I think should go with the garage business.

Besides selling oils, repairs and accessories, I intend to handle carriage heaters for cars and bricks for same, automobile gloves, mechanics' overalls and lap robes. I will store and care for batteries during the winter and do general overhauling of cars and have them ready for the user in the spring.

There are a great many side lines a garage can handle that really belong to the garage business, and some garage-men think those things should be left to general stores. General stores handle a good many things that should be left for the garage, and I believe a garage can handle enough side lines to keep them paying during the winter.—**GLOCKZIN MOTORS, LTD.**, Daniel Glockzin, Czar, Alberta, Canada.

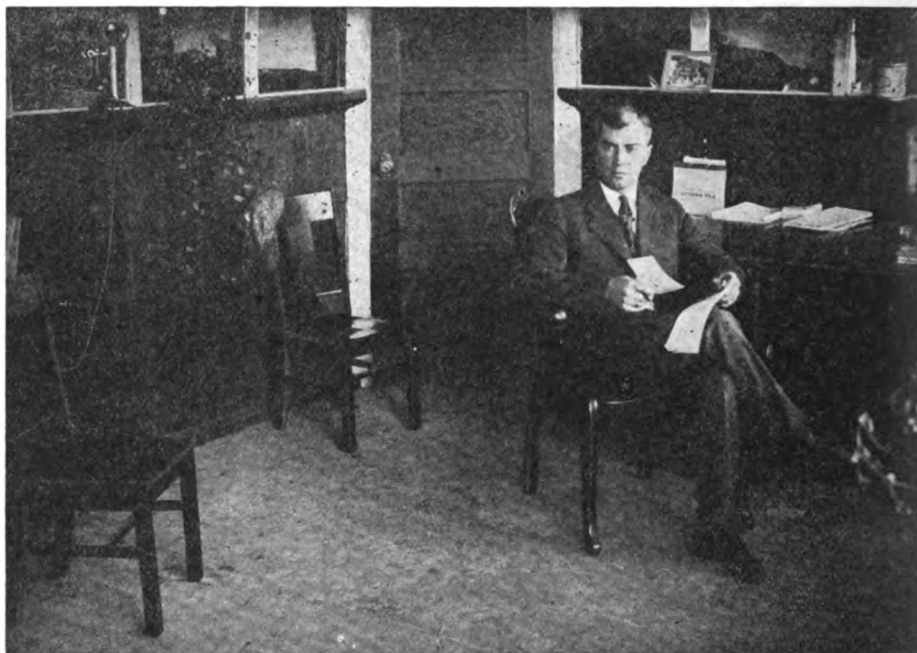
### Who He Is

Czar is a little town over on the eastern side of Alberta about 250 miles north of the American-Canadian line. But the proprietor says these small matters do not at all interfere with his getting Winter Business—if he decides to go after it.

Glockzin was born on a little farm near Stanton, Mich., and worked there until he was past 24 years of age. He went to Alberta in 1907, leaving the home town with two cents in his pocket. He did not have even a common school education.

He started in to work for \$1.75 a day on an Alberta farm. In 1910 he drove in a buggy to Czar and located, sleeping the first three nights under his buggy on the prairie while he was building his shack.

He started in business with a small store and now owns two. In 1917 he started his garage. Besides Glockzin Motors, Ltd., he operates Glockzin Machines, Ltd. The town has a population of not more than 150.



*THIS IS DANIEL GLOCKZIN. His home town is Czar, Alberta, Canada, a little railroad town in the cold, cold Northwest. But he's going to get Winter Business. Note the neat garage office, the trailing vine at the left and the white collar, gold ring, neat desk and business atmosphere*



*And this is the place in which he is going to get the Winter Business*

## Sell Cars This Winter

*If You Can Get Any To Sell*

### BACK TO BUSINESS

SOME dealers have no cars. Others have a few. Others have quite a lot. The time to sell them is NOW.

There is no need to be alarmed about a big flood of cheaper cars in the spring. Prices do not look as though they could be reduced before next September. The need for present selling is not because of prices but because the dealer should start BACK TO BUSINESS NOW and not next week.

You have your overhead to pay. Your principal asset is time, and there is little standing in the way of making the next few months profitable.

You should snap your sales organization back into working order at once and get things moving. If you don't some other dealer is going to get the jump on you and you may find yourself sitting on a rock watching the parade go by.

Get started back to business NOW.

Revive that old prospect list, chuck out the deadwood, put on some new names—some real ones—and begin a sales campaign. Send out letters to the effect that the resumption of business means an early demand and that the sure way to have a car next spring is to buy it now.

Tell prospects there is no likelihood of prices decreasing for months. Tell them that even with the lifting of the lid on steel it will be months before production can be affected because it takes a long time after a piece of steel leaves a steel mill before it comes out in the shape of a finished car.

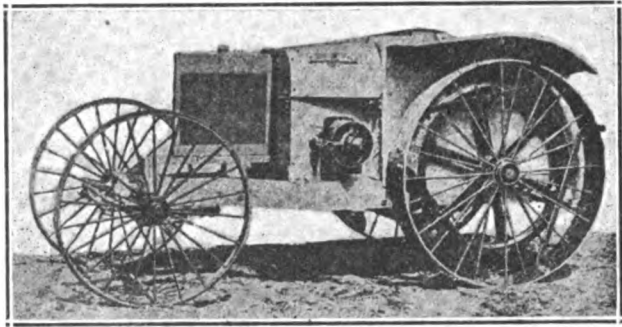
Tell them you anticipated the ending of the war and secured a stock of cars to supply the demand that would come immediately and that, while you have a fair stock, it won't last long.

Get your salesmen at work intensively. Begin to plug as hard on sales RIGHT NOW as you ever plugged in your life. If you haven't salesmen get hold of some likely young fellows and begin breaking them in. START NOW.

In a few months you will be able to sell cars more easily than you can now, but all the business you can do in the next four months will be that much of a start on the return to business. Don't wait. Start.

*Winter Business is mostly a question of going after it in the same way Glockzin goes after it, as described on the preceding page. IT CAN BE DONE.*

## Push Tractors This Winter



### ACTUALLY "DOING IT"

THE

## PARRETT TRACTOR

### Establishes World's Non-Stop Record

at National Tractor Demonstration held at Salina, Kansas, during the week of July 29th.

### 80 ACRES IN 80 HOURS

The PARRETT 12-25 Tractor in an official test at America's greatest Tractor demonstration, plowed 80 acres in as many hours, practically without a stop, running day and night, and used an average of two gallons of kerosene to the acre.

### A TREMENDOUS ACCOMPLISHMENT

From Motor World, Aug. 14, 1918

"But, however, unsatisfactory from the point of view of the public, may have been the voluntary tests made at Salina this year, there was one which established more than one world record and which will gather historical importance as time goes on. This was the 100-hour non-stop plowing test put on by the Parrett Tractor Company.

"While marred by some unfortunate misadventures which prevented the making of a flawless record, yet the plowing of approximately eighty acres in approximately as many hours of actual plowing, at a rate of fuel consumption only slightly in excess of two gallons per hour, sets a mark in tractor performance. Possibly many other makes could have done as well. But the fact remains that this particular machine plowed eighty acres in as many hours, practically without a stop, and thus established the fact that the tractor may be depended upon by the farmer to carry his peak load whenever and however that presents itself.

"This is a tremendous accomplishment. It is a conclusive demonstration that the tractor has arrived and that it is ready to do that for which it is intended. From the standpoint of the merchandiser, it provides the proof to back up what representation he may make as regards tractor endurance and efficiency and places in his hands a big selling argument.

"In the past the dealer may have thought such a thing was possible; he may have assumed that it could be done, but never before did he have the accomplished fact upon which to fall back."

### RIGHT HERE IN PENNSYLVANIA

At Norristown on Tuesday, August 6th, at the Montgomery County Farm Bureau tractor demonstration on the State Hospital farm, the PARRETT plowed over an acre in an hour and finished 20 minutes ahead of any of the 16 tractors entered.

FOR SIX YEARS THE PARRETT TRACTOR HAS PROVED Efficient and Thoroughly Reliable. It is the ideal farm power and especially adapted to Pennsylvania conditions. Nine are in use by the Pennsylvania Department of Agriculture, and critical tractor buyers are selecting it wherever it has been introduced in the eastern part of the State. You owe it to yourself to get an efficient machine when purchasing farm power.

**KEYSTONE TRACTOR & IMPLEMENT CO., LTD.**  
15 S. Third Street, Harrisburg  
**PENNSYLVANIA DISTRIBUTORS**

*This dealer—the Keystone Implement & Tractor Co., Harrisburg, Pa.—couldn't get just the kind of literature he wanted as soon as he wanted it, so he took an extract from the Motor World story of the Salina demonstration and printed this piece of literature for his own use. He used it as a folder and a newspaper ad, 6½ x 13 in. Mail literature to your tractor prospects NOW.*



# THE LAW

By George F. Kaiser

As It Applies to  
Dealers  
Repairmen  
Garagemen

## Soldiers' Pre-War Debts

Editor Motor World: Now that peace is here at last what right is there to collect bills against debtors who entered the army after running up a bill? Does the Soldiers and Sailors Civil Rights Bill still apply?—J. A. C., New York, N. Y.

Answer—Under this law the period of military service as used therein includes the time between the following dates: For persons in active service, at the date of the approval of the act, it begins with the date of the approval of the act; for persons entering active service, after the date of the act, it begins with the date of entering active service. It terminates in each instance with the date of discharge from active service or death when in active service, but in no case later than the date when the act ceases to be in force.

The act itself provides that it continues to be in effect until "the termination of the war and for six months thereafter." Termination of the war is defined to mean "the termination of the war by the treaty of peace as proclaimed by the president."

## Garageman's Liability for Frozen Cars

Editor Motor World: Will you kindly tell me how I may protect myself in case of fires, thefts and cars freezing and left at storage in my garage? My garage is not heated, and I have several placards stating "Cars stored at owners' risk." Is this sufficient?—J. W. William, William Garage, Salisbury, Maryland.

Answer—As to your liability for loss to cars through damage by fire, you are only responsible if you are chargeable with failure to use ordinary care. A garageman is not an insurer of cars stored with him and therefore is not responsible unless he neglects to do something that the law requires him to do.

A garageman's responsibility for loss by theft is about the same as his responsibility for loss by fire, although ordinarily he is not responsible for small articles of personal property left in cars by owners unless his attention is called to them, and he can be considered to have accepted the care of them.

In case of suit in either of the above cases, all that the customer need show is that the property was delivered to the garageman, and that when a demand was

## The Purpose

of this department is to help our readers smooth out the legal kinks that now and then cause them confusion in their business. What legal knots are you trying to untangle? Mail them to us. We will be glad to help you. In sending queries, be sure to include copies of contracts and notes to which you refer.—EDITOR.

made for its return, the garageman failed to return the property. The garagemen then has the burden of proving lack of negligence on his part. If the garageman can show a good excuse for his failure to return the goods he is excused, if he cannot do so, he is held responsible.

As to frozen cars, the garageman's responsibility depends in a great measure on what the understanding of the owner was as regards heat at the time the car was turned over to the garageman for storage. The best way to avoid liability is to have a specific contract provision. If this has not been done, and it was agreed that heat was to be furnished, the garageman is responsible. If on the other hand the agreement was that no heat was to be furnished he is of course not responsible.

If freezing is caused by something beyond the garageman's control, after he has taken all proper precautions, of course he is not responsible.

Under ordinary circumstances a garageman is under no duty to put alcohol or any other anti-freeze compound in his customers' radiators, or to drain the water off from them, as there might already be some non-freeze solution in them. Then, too, in order to properly drain a radiator it is necessary to start the motor, which is something the garageman usually has no right to do.

## Wisconsin Law on Checks

Editor Motor World: Some time ago you printed the New York law with relation to bad checks and stated that it is a misdemeanor to pass a bad check in New York now. At the same time I think you said that Wisconsin has a law similar to the New York one. Will you please

advise what the Wisconsin law is on this point and also if it is a crime to pass a check if there is not enough money in the bank to cover it.—E. M. F., Racine, Wis.

Answer—The Wisconsin law on this point reads as follows:

Any person who with intent to defraud, sell, make or draw or utter or deliver, any check, draft or money order upon any bank or other depository knowing at the time . . . that the maker or drawer has not sufficient funds in, or credit with such bank or other depository for the payment of such check, draft, or order in full, upon its presentation shall be guilty of a misdemeanor, and punishable by imprisonment for not more than one year or by a fine of not more than \$1,000, or both fine and imprisonment.

As against the maker or drawer thereof, the making, drawing, uttering, or delivering of a check, draft or order, payment of which is refused by the drawee, shall be prima facie evidence of intent to defraud and of knowledge of insufficient funds in or credit with such bank or other depository, providing such maker or drawer shall not have paid the drawee the amount due thereon, together with all costs and protest fees, within five days after receiving notice that such check, draft or order has not been paid by the drawee.

The word credit as used herein shall be construed to mean an arrangement or understanding with the bank or depository for the payment of such check, draft, or order.

This Wisconsin law is very similar to the New York law except that under the latter the maker is guilty of larceny while in Wisconsin the maker is guilty of a misdemeanor.

An interesting case which shows how necessary it is that checks be immediately deposited and presented to the bank on which they are drawn has just been decided in the New York Supreme Court.

It appeared that on May 13, 1910, a co-partnership was indebted to a corporation in the sum of \$412.86.

On that day one of the partners drew a check on his bank for that amount, and mailed the check to the corporation which received it the next day and immediately deposited it in its own bank.

Shortly afterward the partner's bank closed its doors, leaving the check unpaid.

The court decided that there was a payment by the partnership and that the corporation could not recover the amount from it, as the check was not presented for payment to the partner's bank until May 16, and the corporation's bank, which was its agent, did not follow up the matter of non-payment before it closed on May 20, thus depriving the partner of a chance to do so before it closed its doors.

# BROTHERS ALL

IN MOTOR WORLD of Nov. 6 was an editorial headed "Brothers All." Its big thought was that, while there is good-will between manufacturers and dealers, there should be co-operative meetings of the dealers and manufacturers at fixed and regular dates, so that the two may not drift apart in case big emergencies do not arise to bring them together. It was suggested that a committee from both organizations meet in conference two or three times a year, and that once a year there be a general session of the National Automobile Chamber of Commerce and the National Automobile Dealers' Association. A copy of this editorial was sent to the officers and directors of the N. A. C. C. and the N. A. D. A. with a request for an expression of opinion. Here follow all the letters that were received. Additional opinions will be welcomed.

**F. W. A. Vesper**

*President of the N. A. D. A.*

Editor Motor World: Have your letter and proof of the editorial and it certainly meets with my ideas exactly, because I am sure that the dealers operating in harmony with the manufacturers on any of the questions that might develop from time to time would be a mighty good thing for the industry and certainly for the effect of ironing out some of the things, that need correction.

A frequent interchange of ideas cannot help but be a good thing.—F. W. A. Vesper, St. Louis, President National Automobile Dealers' Association.

**E. E. Peake**

*Executive Secretary of the N. A. D. A.*

Editor Motor World: Am in receipt of your favor of Nov. 4 and also the copy of editorial which will be in this week's paper.

I think you have hit on a splendid suggestion here, and hope such a meeting as you suggest can be brought about. The war is apparently ended and we must think now about getting back to normal lines.

The war has eliminated a great many of the abuses which had crept into the automobile business. Our big problem now will be preventing these very grave mistakes from getting back into the business in the reconstruction period.

A great many of the so-called errors have been forced on the dealer through factory policies. For instance, the one big bugaboo which has cost the dealers so much money is that of service. In the dealers' organizations where they have tried to put over a uniform service agreement it has been found that it would be impossible because one or more dealers had to follow a certain service plan as outlined by the factory. Of course, this is only an illustration of a number of other things of the same nature.

If the automobile dealers of the country would only work along co-operative lines both with their competitors and with the factories, we would see quite a different automobile business after the war. It is the only safe plan to work on.

## LETTERS

*from*

## READERS

By operating their business along proper lines after the war a great deal larger percentage of profit can be obtained. It would be a calamity, in my opinion, if dealers should ever go back to a credit basis for service and repairs; likewise, if they should remain open Sundays and evenings and do all of those things which have been eliminated by the economy program during the war.

To make these ideas permanent and effective there must be a co-operative feeling among the dealers as a whole and among the factories as a whole. It is not enough to have co-operation with one dealer and his factory and not with other dealers in the same town or city and the factories they represent.

One thing I am sure this war has taught the American business man is the tremendous advantage gained by co-operation, and I believe that one of the greatest results for good is going to be that lesson.

A number of new words have been added to the vocabulary of the world by the war: "Camouflage," "propaganda," etc. There has been entirely too much of the first in the automobile business and not enough of the latter. Those who are interested in the welfare of the after-the-war automobile business must deal on a constructive program.

We have quit saying "pleasure car" and are now talking "passenger car." We have at least squeezed all the pleasure talk out of the selling organizations of the country and in their places have injected the utilitarian medicine. But without the right kind of propaganda this work will all be undone.

It is my opinion that all of the automobile factories are anticipating a wonderful business after the war, figuring on an increased production over that of 1917 or 1918.

It is also my opinion that the N. A. D. A. and the N. A. A. C. should work together along the lines of creating further uses for the utility car. The motor

transport and motor express propositions have been created by the war, and while it hasn't gotten very far it has gotten far enough to show that it is possible to build up a third line of transportation in this country, the first line being the railroads and the second the waterways.

However, this third line of transportation will never reach a point of success until we have permanent highways over which to operate. We have coming back to this country over two million men who will not be satisfied to live in this country and live on mud roads. They have been taught by their experience in Europe the absolute necessity of a permanent road, one that begins somewhere and goes somewhere. This country is "right" for the largest road building program the world has ever known. Some States are already getting a head start. Last Tuesday the State of Illinois voted a bond issue of sixty million dollars for the building of permanent highways in that State.

All communities have arrived at a point where they will build permanent highways if the proper campaign of education is put on with enough money back of it to push it through, and I believe that the greatest thing that can be done by both the automobile factories and the dealers of the nation is to apportion a certain percentage of their profits to be turned over to an association, either an association composed of the N. A. A. C. and N. A. D. A. or one or the other, and let this fund and let this organization be the prime and constant movers in getting roads built.

With an organization composed of these two national associations I believe it is possible to get a road building program through Congress which will insure at least two permanent highways each way north and south across the country.

For years the automobile business has been feeding off a natural supply, and there has been very little done by either manufacturers or dealers toward looking ahead in opening up new fields, but with the clearing up of this war it seems to me time for the automobile business to begin to use its head instead of working so hard with its arms, and I know of no better way of approaching the new era than by getting together such a meeting as you propose in your editorial, which is headed "Brothers All."—E. E.

Peake, Kansas City, Executive Secretary National Automobile Dealers' Association.

### J. H. MacAlman

*First Vice-President N. A. D. A.*

Editor Motor World: Yours of the 4th inst. enclosing copy of the editorial page in your next issue of the Motor World received, and I want to congratulate you on this particular page and on the good work that Motor World has been doing in assisting the dealers in all their best efforts to build up the good feeling between the manufacturers and dealers.

I certainly agree with you that the interests of the dealers and manufacturers are the same, and their getting closer together is going to be of mutual benefit.

The dealers could probably improve their conditions by being in closer touch with the factories and the men that are producing the goods that they are merchandising. The merchandising end of the automobile business is getting to be a greater essential in our industry every year, and I think the manufacturers would be surprised to meet the bright minds that are employed in merchandising their product.

I feel sure the feelings that have existed in the past have been melting and our work during the war has shown to the manufacturers that we are working for the some results that they are.

I am at this time, and have been in the past, of the opinion that there are a great many things that the dealers could assist the manufacturers in as well as being assisted by a closer communication with them.

Again congratulating you on this good work and trusting our efforts will be rewarded by having an annual meeting of the two bodies in the very near future, I remain, yours very truly, J. H. MacAlman, Boston, First Vice-President National Automobile Dealers' Association.

### John H. Johnson

*Director of the N. A. D. A.*

Editor Motor World: Replying to your favor of Nov. 4, Mr. Johnson has instructed the writer to say that he considers the editorial for Nov. 6 issue very fine indeed, and appreciates your bringing it to his attention.—Buick Boston Co., D. E. Ames, Treasurer.

### A. E. Maltby

*Director of the N. A. D. A.*

Editor Motor World: Your letter of the 4th received, together with the copy of the editorial which has appeared in your issue of this week.

There is no doubt in my mind as to the good that will come to the automobile industry, not only the manufacturing end, but the selling end as well, if

the two ends can be brought together as you suggest at a conference at stated periods.

The dealer cannot get along without the manufacturer, nor can the manufacturer get along without the dealer. Each has his own peculiar problems to solve, but many of the problems of each are the problems of both, and there is no better way to solve them than by getting together and talking them over.

The best of feeling prevails between the manufacturers' association and the dealers' association as associations, but I believe a still better feeling and closer co-operation could be obtained by a meeting once a year of the dealers and manufacturers as a whole, and possibly three or four times a year of a committee of one organization with a committee of the other.

You have started something, and I trust it may lead to such conditions as we all hope to bring about.

With my best wishes for the success of the plan and my best personal regards to you, I am very truly yours, A. E. Maltby, Philadelphia, Director N. A. D. A.

### [For Alvin Macauley

*Director of the N. A. C. C.*

Editor Motor World: Mr. Macauley has referred to me your letter of Nov. 4, to which you attached an editorial which will appear in the Motor World issue of Nov. 6.

I am heartily in favor of your constructive suggestion, feeling that you are dealing with a most important situation, and that any move which tends to bring better understanding and better merchandising methods between the dealer and the manufacturer should have every support of these two parties.—E. H. Hare, New York, Vice-President of the Packard Motor Car Co.

### Alfred Reeves

*General Manager of the N. A. C. C.*

Editor Motor World: I have read with interest your editorial headed "Brothers All," which supplied some mighty helpful thoughts. The manufacturers are keen to co-operate with all organizations that contribute to the advancement of the industry. We have assured Mr. Vesper, of the dealers' association, that if he has anything of interest to discuss we shall be glad to work with him.

He has co-operated in fine fashion, as evidenced by his attendance at our Washington meeting last week, when the parts matter was discussed, and in connection with which his presentation carried great weight.

Personally, I believe it better to meet as often as may be necessary for the consideration of important matters rather than to have infrequent meetings at definite times.—Alfred Reeves, New York, General Manager National Automobile Chamber of Commerce.

### George D. McCutcheon

*Director of the N. A. D. A.*

Editor Motor World: Replying to yours of the 4th. We think the suggestion made by you in your editorial is not only a splendid one, but should be productive of good results. The idea of joint meetings at definite fixed times, possibly quarterly or at least semi-annually, of either representatives or the board of directors of the two associations, should not only be profitable but productive of much good.—George D. McCutcheon, Atlanta, Director National Automobile Dealers' Association.

### P. E. Chamberlain

*Director of the N. A. D. A.*

Editor Motor World: Yours of the 4th inst. enclosing copy of editorial, "Brothers All," is acknowledged with thanks.

I am very much in accord with this idea. I think we all recognize the fact that an association of dealers must sooner or later take up with the manufacturers certain matters of national import. The relations of manufacturer and dealer are so closely interwoven that it is manifestly impossible for each to travel his own road, holding no intercourse with the other. The prosperity of one depends upon the prosperity of the other. In the proper spirit each should be glad to meet with the other for the common good.

It has been my idea from the beginning of the National Automobile Dealers' Association that the United States should be divided into at least three north and south zones, and that from these zones the directors should be elected. At least one director from each zone should then form an executive committee, with the officers, and this committee should have stated meetings either every three or every four months with the directors meeting semi-annually and the association annually.

An executive committee could thus bring forward the sectional problems of the trade often enough to have them receive serious consideration. The directors, then, could save considerable time at their semi-annual meetings, allowing them to devote most of such meetings to a joint meeting with manufacturers' representatives, as your editorial suggests. If we put the "N." before "A. D. A." we must make it stand for NATIONAL. West of the Missouri River there is a great country unexplored by our eastern friends, or most of them. Its problems are akin, but not the same as those confronting the East or South.

Let us knit the entire country into this association of ours. Let us sit with manufacturers around the conference table, frankly discussing the problems of the industry of which we are each so vital a part that neither can exist without the other. Let us, thus, be "Brothers All" for the announced purpose of making it the BIGGEST—not the third largest—industry!—P. E. Chamberlain, Denver, Director of the National Automobile Dealers' Association.

# Back to Business—and Keep Your Dealers Up and Going

---

*There are four trumps in this hand and they are taking tricks, the value of which will be fully known when the future's curtain is lifted*

---

ST. LOUIS, Nov. 18.—The Overland Automobile Co. of this city has been making a very special effort to keep its leaders up and going during the period of difficulties and plans to continue its efforts. So far the company has played four trumps:

*Profitable service  
Accessories  
Used cars  
Tractor*

So General Manager F. M. Henry of the Overland company was asked as to how many tricks he had taken.

"We are making a slam," was his reply. "We are keeping our dealers up and going and they are all able to buy W. S. S. and most of them bought Liberty Bonds, as well as keeping up the rent. We hope they will all be able to show a profit during the years to come.

"We lack just one card. That is a truck. If we had a truck now we could play it as a pair with our tractor and make a double educational campaign at one trip. There are certain reasons why we have not been playing the truck card that need not enter into this discussion.

"Our ace is the accessories. With this, of course, come tires. But just a word before we enter into present conditions.

"The Overland Company is not going into the present situation on impulse or blind. Neither are our dealers. We began the course of training two years ago. Ever since there has been this unusual situation this company has taken the position as best friend of the dealers and it has given good advice.

"A year ago we told our dealers something about spring deliveries and we hit it exactly. Our dealers had cars when others could not get them. We had the idea about storage and our great building here helped with that. The year before we had given them some excellent advice that helped them to make money. I

might say that the year just closed has been a very profitable one for our dealers and they go into this situation in good shape.

"Now to get back to the accessories. We have for a long time had dealers who sell accessories and some of them sold a good many. Recently we reorganized our accessory department and made it larger and changed the name to the Mid-West Accessory Co. Now those dealers who were too busy selling cars to bother with accessories are finding time to give heed to the small things. As a result they are making money from the accessories. They know that we can sell them accessories better than anybody else.

"Along with this goes the tires. A year ago we began distributing Brunswick tires in a small way, but we worked at the job and pushed them, because we thought we saw the time coming when we and our dealers both would need the tire business. It has grown into a well worth while tire business, which means that a good many of our dealers have a tire business and they are glad that they have.

"So when we get our dealers together they tell each other that they are doing well with accessories and tires and the others believe them because they belong to the Overland family.

"The reason for changing the name of our accessory department was because with the Overland company selling accessories we were practically limited to Overland dealers. Under the name of Mid-West Accessory Co. we have no such limitations, yet our dealers know with whom they are dealing. So do the others, as a matter of fact, but the catalog that they show to the customer is not an 'Overland' catalog.

"Now as to the used car proposition. We have had a splendid used car department for a long time. The last year, of course, has been the best. But it always was a workmanlike used car department. We have used this department to help our dealers. We were willing to sell cars they could not sell and we would supply them with cars they could sell.

"Also Mr. Gibson, in charge of the used car department, was willing to give them the advantage of his long experi-

ence and excellent judgment. We had no secrets from them. We supplied them with market lists of used cars for this community and notations from Mr. Gibson and suggestions for their particular section. As a result the used car was never a joker in the other man's hand for our dealers. As conditions have changed recently, we have kept our dealers informed and have warned them against discarding cars that were likely to prove winners:

"As to service, that education began in Toledo, with the positive rule that free replacement of parts should be considered only for 90 days and then only if the parts were defective. After 90 days, if a broken part appeared to have been defective in any way, it was replaced free, but the car owner paid for the labor.

"Our dealers were well lined up on that program when the need came to make everything pay. They already had educated their car owners not to expect something for nothing and their prices were on a profit basis. Later education has been along the line of what constitutes a profit and how to find out what cost is and what constitutes a profit. None of our dealers have anybody to blame but themselves if they are getting poor through the service department. They have been given direct advice as to value of the waste of material and on other points they might overlook.

"As to the tractor, we have some dealers who have done very well, but we are not fully set on that point. We made the mistake some others have made. When we took the Plowman tractor, we centered on a too small size. It was a good tractor and where sold under favorable farm conditions it did excellent work. But the greatest demand for the country in which our dealers must work was for a heavier machine. We are not selling the kind of a tractor that will meet the demands of the biggest trade in our district. We lost a year in the way of business, but we and our dealers have been educated in that time.

"Many of our dealers are much interested in the tractor and our general course of education is going on nicely and we expect some excellent business

(Continued on page 40)

# Look Out for Jack Frost

*See That Your Radiator Is Filled with a Solution Which Will Not Freeze—  
Keep the Storage Battery Fully Charged—Watch the Springs*

**T**EMPERATURES below the freezing point have already been reported in many parts of the country and we can look for freezing weather pretty much all over the country at any time. See that your customers' cars are provided with radiator mixtures capable of withstanding cold weather. This is a chance not only to safeguard your patrons but also make some money by selling the necessary materials to make up the anti-freezing mixture.

Alcohol, glycerine and calcium chloride are largely used for making anti-freezing mixtures, but there are also a number of compounds being placed on the market by reliable manufacturers which in many cases are not only more effective, but also a great deal cheaper, owing to the very high price of alcohol and glycerine.

## The Alcohols

Either wood or denatured alcohol may be used and can be purchased by the barrel, 5-gallon cans, 1-gallon cans, etc. Alcohol is easily handled and has no corrosive action on the cooling system.

Wood alcohol freezes at a lower temperature than denatured and therefore less of it is required to produce a non-freezing mixture, but this advantage is largely offset by the fact that it evaporates more rapidly, and therefore wood alcohol must be added to the solution daily.

The proportions of either wood or denatured alcohol to produce a mixture with a definite freezing point can be made up from the curve on the opposite page.

Denatured alcohol evaporates very much less rapidly than wood alcohol and is, therefore, preferable for use in anti-freezing mixtures. The rapid evaporation of wood alcohol also forms a gas which comes out of the overflow tube of the radiator and if there is any kind of an open flame or a spark close to the end of the tube there is danger of fire. Many insurance companies, therefore, frown on the use of wood alcohol as an agent in reducing the freezing point of radiator mixtures.

## Calcium Chloride

In using calcium chloride care must be taken to obtain it chemically pure, as the commercial variety contains free acids which react on the metal parts of the cooling system. If it is impossible to obtain it chemically pure, the chloride may be made fit for use by adding ammonia or soda potash gradually until blue litmus paper\* no longer turns pink when moistened with the solution.

\*Blue litmus paper may be purchased at drug stores. It turns pink when the slightest amount of acid is present in a solution.

## Glycerine

Aside from the expense, there are many objections to the use of glycerine and water as a solution. When enough glycerine is added to produce a low freezing point, there is a danger of rotting the rubber hose connections and the solution is so thick that it does not flow readily. This is a great objection, especially in thermo-syphon systems. Glycerine has the advantage, however, that it does not boil away rapidly like the alcohol. Opposite is a curve which gives the proportions to be used for different freezing points. The difficulties in the way of using glycerine or alcohol alone in the water have led to the use of a mixture containing both alcohol and glycerine. In this way a solution is obtained that has in a large measure the good points of alcohol and glycerine. The presence of glycerine raises the boiling point, thereby evaporation and yet the glycerine is sufficiently diluted to allow a free flow and to reduce its action on the hose connections to a negligible amount.

The alcohol and glycerine are generally added in equal parts to the water, the amounts depending upon the freezing point desired. When replacement becomes necessary because of evaporation, it is only necessary to replace with a solution of water and alcohol as the glycerine itself does not evaporate. One disadvantage of the alcohol-glycerine solution is that there is no way of telling how strong the solution is at any time and therefore considerable chance is being taken as to whether the radiator will freeze or not. With a straight alcohol solution the strength of the solution can be determined by means of a hydrometer if the solution is cold. The same holds true with the glycerine solution. In the alcohol solution, a strong mixture will be very much lighter than a weak mixture. In the glycerine solution, a strong mixture will be heavier than a weak mixture. In a combination solution containing both alcohol and glycerine, the alcohol tends to decrease the gravity and the glycerine tends to increase the gravity.

## Radiator Capacities

The capacity of the average cooling system is about six gallons, although the figure for individual cars varies widely. For example, such cars as the Briscoe, small Buick, Ford, Great Western, Maxwell, Oldsmobile and Scripps-Booth require about three or four gallons. Larger cars such as the Auburn, Cole, Lewis, Marmon, Moline-Knight, Stearns Knight and Winton require about eight gallons. Commercial vehicles as a rule require from eight to nine gallons of solution and some run up to as high as twelve.

Where thermo-syphon circulation is used, it is imperative to see that there is always plenty of solution in the system so that the solution safely covers the uppermost opening, otherwise the circulation will cease.

In filling the radiator with either alcohol or glycerine solution, do not spill the solution on the finish, as either one of these will mark the radiator. The alcohol is liable to leave a white mark or to remove the glossy finish from the radiator, and the glycerine will form a film which is very unsightly and which is almost impossible to remove, especially if the solution is hot.

The patented solutions which are on the market at the present time are always accompanied by complete directions as to the proportions to use to produce a certain freezing point. The freezing point of plain water is 32 deg. Fahr.

## The Storage Battery

The electrolyte or solution in the battery is only liable to freeze under normal conditions if the battery is partly or entirely discharged. A fully charged battery will not freeze down to a temperature of 60 deg. below zero, so if the battery is always kept charged there will be no danger whatsoever. A completely discharged battery, on the other hand, will freeze at about 15 or 20 deg. above zero, depending on the gravity of the solution. As this temperature is frequently reached in almost every part of the country, the danger of freezing a discharged battery is quite serious. There is no material that can be added to the solution to prevent it from freezing, because any foreign substance would either ruin the plates or cause some other internal disorder.

## Look Out for These

Extreme cold makes springs and other tempered steel parts very brittle and more liable to breakage. This cannot be prevented, but applying grease, oil or graphite between the leaves will reduce the liability to breakage to the minimum because it will remove the other most frequent cause of breakage—rusty leaves.

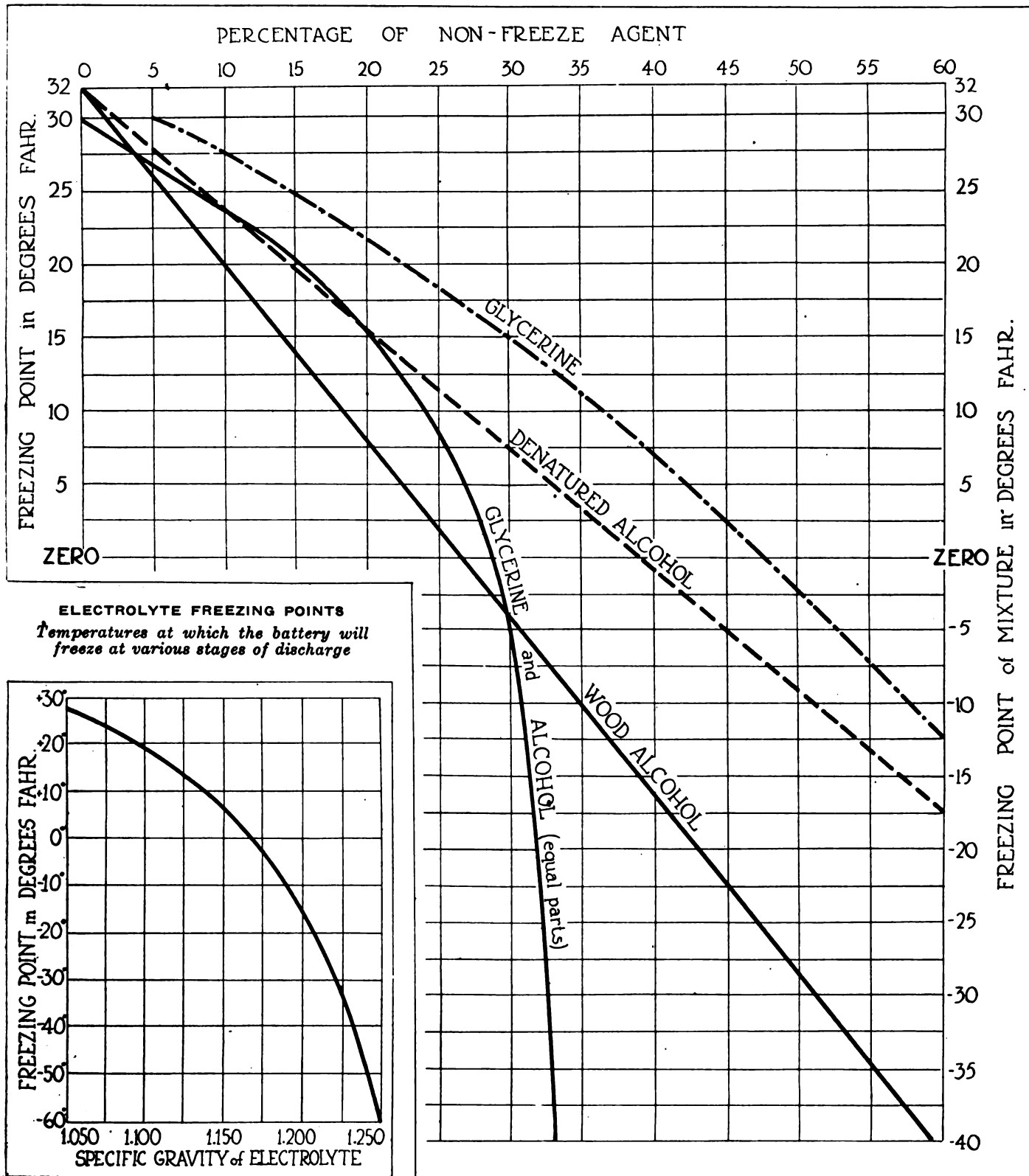
Drain out the sediment trap of gasoline strainer daily. Small amounts of water collect here, and after several days the cake of ice formed will be large enough to stop up the strainer or burst something. A frozen strainer will not leak as a rule till the ice is thawed out, as in a warm garage. When it does thaw out, the gasoline will leak out and this is a fire menace.

Tighten bolts, nuts and cap screws, especially on the steering connections, as these are more brittle in cold weather and will not stand the strain that they will in summer.



# Anti-Freeze Solutions for Radiators

*These Curves Show How Much Alcohol or Glycerine to Use to Reduce Freezing to the Desired Point*



# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1600—REMOVING VALVE-SPRING KEYS ON A CHEVROLET 4-90

Valve-spring keys are removed from the valve stems on the Chevrolet 4-90 by using a lever 1 ft. long, 1½ in. wide and 3/16 in. thick with a slot cut in it, one of the cap screws going through the slot and then caught with a few threads. This provides a fulcrum so that when the handle is pulled up, the offset end of the tool depresses the valve washer and the other hand is free to take out the key.—M. A. Carpenter, Hobart, N. Y.

## No. 1601—PORTABLE FORGE

A small portable forge for heating bent frames is made from one-half of an old Ford axle housing. The tube is cut off to a convenient length and the end stopped up with a tin can and fire clay. The side of the tube is tapped to receive a piece of ½-in. pipe which supplies the air from the air line, and this piece of pipe also acts as a handle. A piece of band iron is set in the opening of the bell to hold the coal up, and a 3/16-in. hole admits the air.—C. H. Fessler, Covington Garage and Machine Shop, Covington, Pa.

## No. 1602—JIB CRANE

A jib crane for lifting engines is made of 3-in. iron pipe and fittings. A piece of 3½-in. pipe is bedded into the floor for about 2 ft. to act as a sleeve to hold the post. The horizontal section is placed about 8 ft. above the floor level, and the free end of the crane is provided with a roller which rests on the floor and takes the weight at that end. This crane can be swung to any position within its radius and can be pushed back out of the way when not in use, or removed from the sleeve entirely.—Ed. Frisz, Smith Garage, Indianapolis.

## No. 1603—GREASE GUN FOR FILLING CUPS

A grease gun is used for shooting grease into a bearing instead of filling and screwing down the cup several times. The grease gun is fitted with a rubber tube which is slipped on over the spout. The cap of an old grease cup is drilled with a ⅝-in. drill and a piece of ⅝-in. copper tubing soldered into the hole. The other end of the rubber tube is slipped over this. To operate, the regular cap is removed from the grease cup, the new cap put on, and the grease forced into the cup.—W. B. Wheatley, Ford Agency, Charlotte, N. C.

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

*1—Describe the shortcut briefly but clearly, in few words.*

*2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.*

*3—Write on ONE side of the paper only.*

*4—Sign your name and initials, the name of the company you are with, and the town.*

*Write plainly. If your name is unusual, print it in capital letters.*

## No. 1604—TESTING PLUG INSULATION

When testing spark plugs on an open tester, if a strip of mica or 6000-volt insulating tape is slipped between the points, many plugs will prove defective that would ordinarily be passed as O. K. The stoppage of the spark between the points causes the spark to seek a path in another place and it will pick out the weakest point which is the defect.—A. L. Bennett, Buffalo, N. Y.

## No. 1605—SPEED WRENCH FOR FRONT-AXLE SPINDLE BOLTS

Spindle bolts in the front axle are quickly removed with a brace made up

from a pair of differential gears, a socket and a handle. This allows the bolts to be turned out as fast as the handle can be turned, the bolt first being loosened with an S-wrench. The gears are softened and pinned to the two shafts which revolve in the casting so that the gears mesh. One of the shafts is bent into a crank and the other is pinned into a socket to fit the bolt. An extension of the casting forms a grip to steady the wrench.—D. A. Hampson, Middletown, N. Y.

## No. 1606—RETHREADING SPRING CLIPS

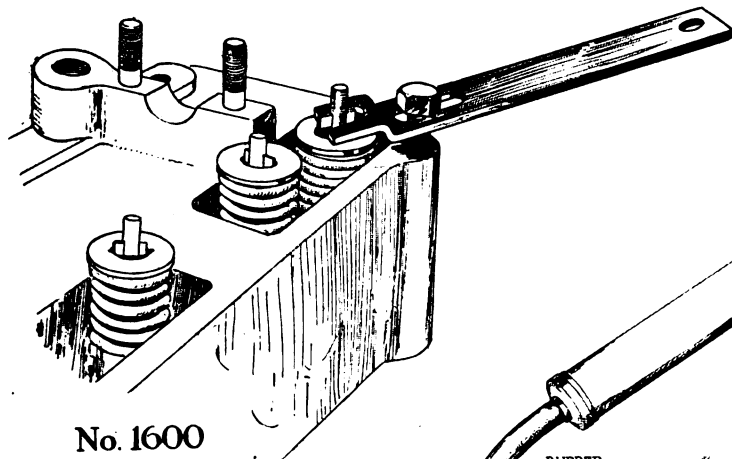
Spring clips are rethreaded with a round die which is turned by a U-shaped piece of ¼-in. drill rod, the ends of the legs being slipped into the clearance holes of the die. The inside of the legs of the U should be filed off sufficiently to clear the threads on the clip. A bar placed in the top of the U enables leverage to be applied to the die.—Scott S. Bond, W. H. Daniels Auto Co., Gulfport, Miss.

## No. 1607—HOLDING SCREW HEADS IN THE VISE

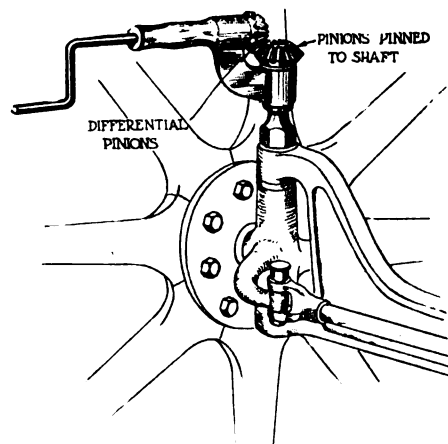
The heads of small screws are held in the vise with a small clamp made of channel iron, a wedge in the U holding them in place and preventing them from turning. A piece of ⅝-in. channel has several holes of different sizes drilled exactly in the center line. Slots are then cut in the sides of the channel to hold the taper wedge which is made so that when forced in, it goes into the slots of the screws and holds the heads tight against the channel.—John Schultz, Turtle Creek, Pa.

## No. 1608—CLUTCH-SPRING HOLDER

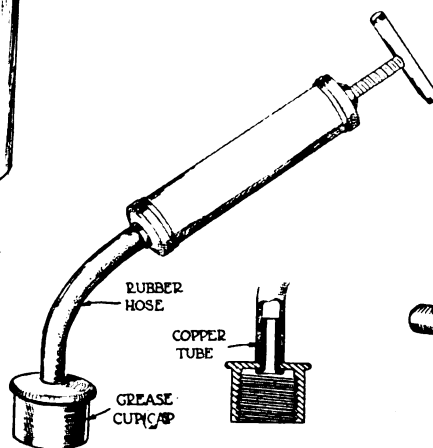
The clutch springs on the 1914 Cadillac are held compressed by pieces of split pipe. The springs are compressed in the vise, the caps being in place on both ends. A piece of pipe, the inside diameter of which is the same as the outside diameter of the cup flanges, is cut to a length a little greater than the distance between the cup flanges. The ends of the pipe are crimped in, and then the pipe is sawed in two lengthwise. The two parts are placed around the spring, the crimped ends catching the flanges of the cups, and a clamp holds them in this position while the spring is removed from the vise and put into position.—G. A. Boyd, Champaign, Ill.



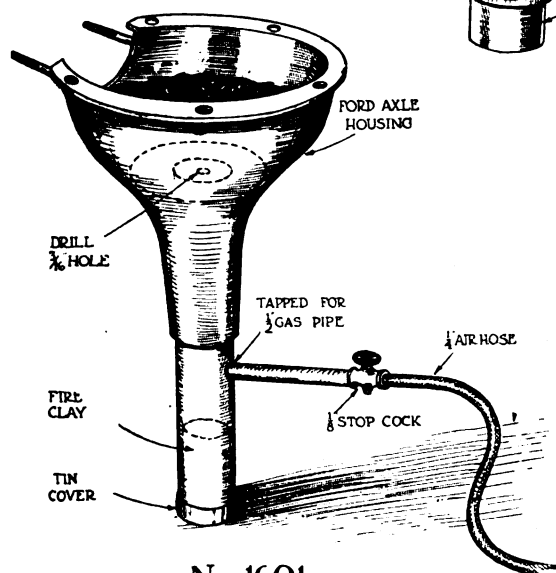
No. 1600



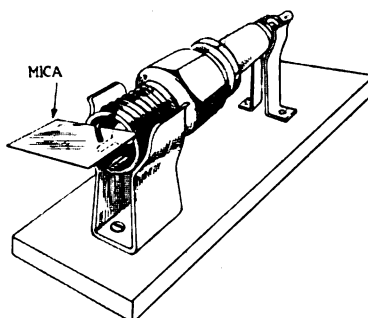
No. 1605



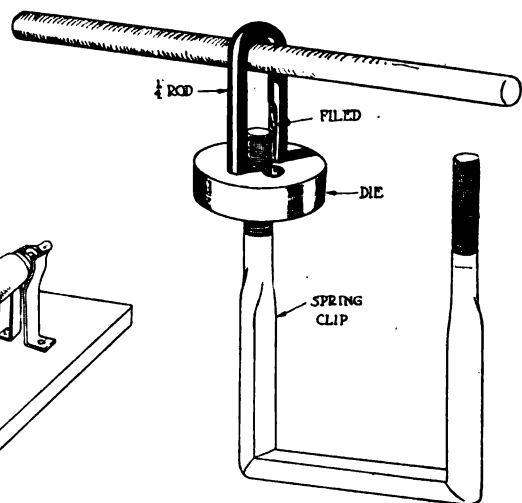
No. 1603



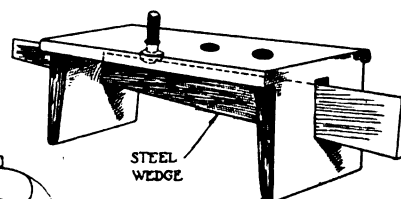
No. 1601



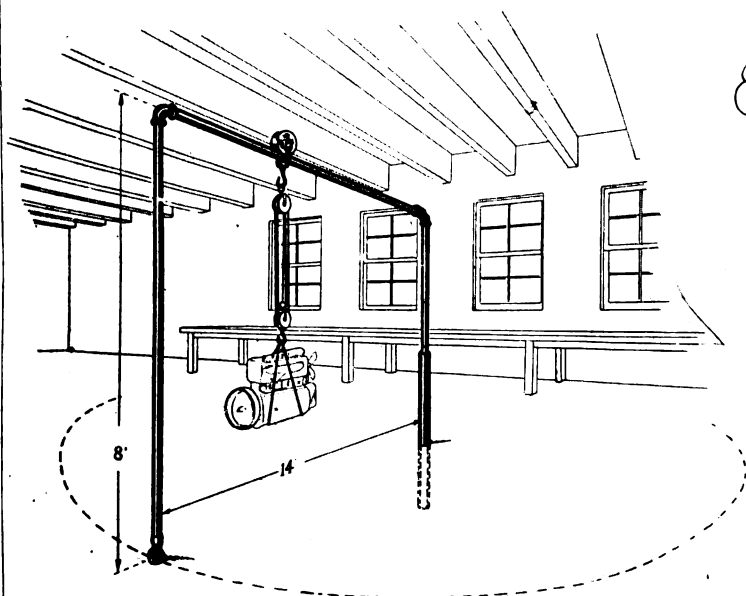
No. 1604



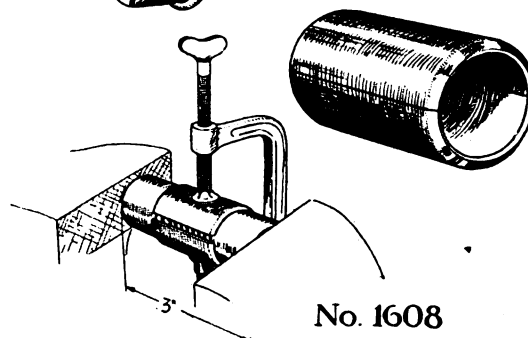
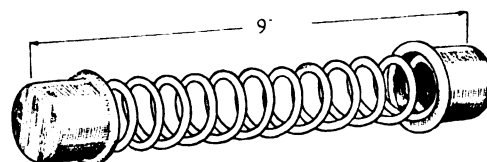
No. 1606



No. 1607



No. 1602

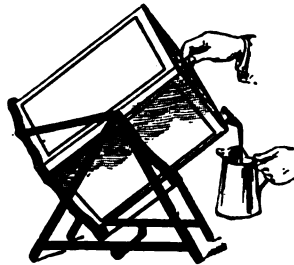


No. 1608

# Automotive Equipment

## HALLADAY CAN TIPPER

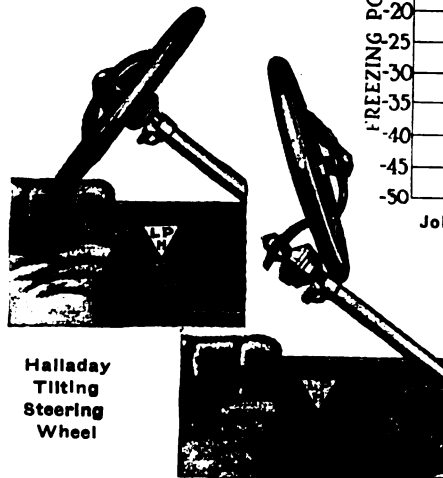
This is a can tipper which fits all square or round 5-gal. cans. It can be placed anywhere on the floor or bench and can be easily tipped to pour the oil, the axis balancing the weight of the contents to reduce the tilting effort to a minimum. It is made of bar steel, japanned.—L. P. Halladay Co., 501 North Monroe Street, Streator, Ill.



Halladay Can Tipper

## HALLADAY TILTING STEERING WHEEL FOR FORDS

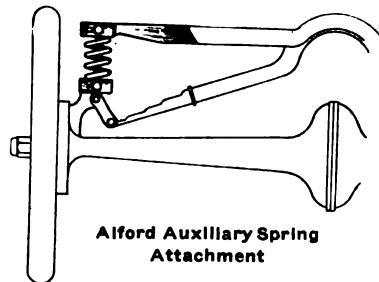
This is a tilting steering wheel for Fords. It is easily and quickly attached by removing the nut on the end of the steering column, removing the regular wheel and placing the tilting wheel on the column. The locking feature is automatic and is released to allow the wheel to be tilted by a slight pull on the trigger on the other side of the wheel arm.—L. P. Halladay Co., 501 North Monroe Street, Streator, Ill.



Halladay Tilting Steering Wheel

## ALFORD AUXILIARY SPRING ATTACHMENT

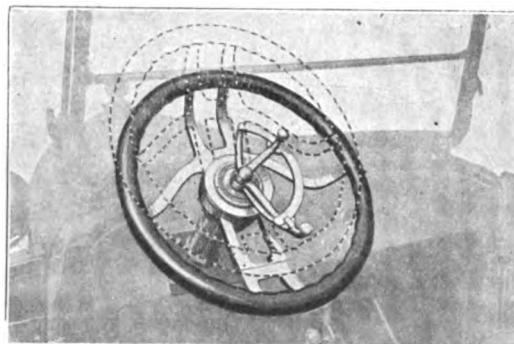
This is a set of auxiliary springs for the Ford car. The spring coils are compressed between sets of pads mounted on the axle and extensions which are attached to the rear end of the frame. The pads on the rear axle replace the regular Ford spring hangers and support not only the coil spring but the leaf spring as well. Price \$16 per pair.—Andrew Hoffman Mfg. Co., Inc., 5034-8 South State Street, Chicago.



Alford Auxiliary Spring Attachment

## MONARCH AUTOMOBILE LOCK

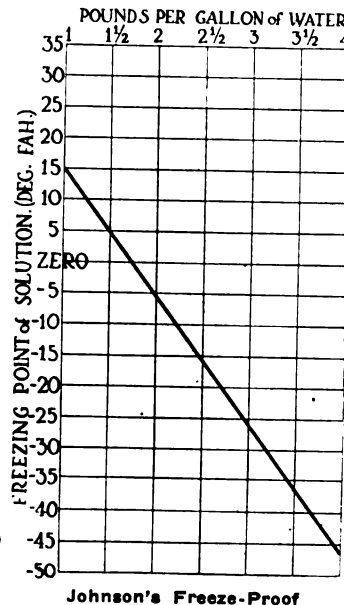
This is a lock which operates by disconnecting the steering wheel from the column, the wheel being moved forward 4 in. and disengaged from the post. A steel bolt is inserted through the column at the same time so that it is impossible to move the column. A Yale cylindrical tumbler lock is used to lock the parts out of position. Driving lugs are made to fit all cars and a new steering wheel is supplied with the outfit. Price \$30.—Monarch Auto Lock Co., 361 Market Street, Kenosha, Wis.



Monarch Automobile Lock

## LUMA LUMINOUS PROCESS

Luma is a fine crystalline powder of yellowish color which emits a greenish light, and this light in the darkness makes any object to which it is applied vis-



Johnson's Freeze-Proof

ible. It may be applied to speedometer dials, gages, ammeters, clocks, watches, push buttons, or any objects which are ordinarily lighted by gage lamps. The material is not sold, but the manufacturer applies it himself.—Radium Dial Co., Forbes & Meyran Avenues, Pittsburgh, Pa.

## JOHNSON'S FREEZE-PROOF

This is a compound which when dissolved in the cooling water of the circulating system lowers the freezing point in direct proportion to the amount dissolved in a given quantity of water. Incidentally, the addition of the compound raises the boiling point from 20 to 40 deg. The compound is non-inflammable, will not damage metals or rubber any more than water will and the freezing point bears a direct relation to the density, consequently the solution can be tested with a hydrometer. A special form graduated in degrees of freezing instead of degrees of density is prepared and sells for \$1. Compound is packed in packages containing 6½ lb. Price \$2.—S. C. Johnson & Son, Racine, Wis.



Ewald Cutout

## EWALD ALL-STEEL CUT-OUT

This is a cut-out for the Ford, Dodge, Studebaker, Hupmobile, Maxwell, Chevrolet or Buick. It is made entirely of steel, saving weight. The two pieces of the cut-out are clamped around the exhaust pipe, a hole having been previously cut in the pipe at this point. The valve fits over the outside of this and when the exhaust goes through the cut-out it goes directly into the air. Price 80 cents for Ford, \$1.25 for other models.—Ewald Novelty Works, Oakfield, Wis.



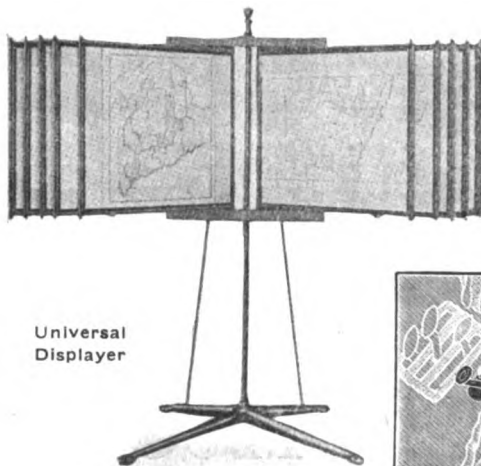
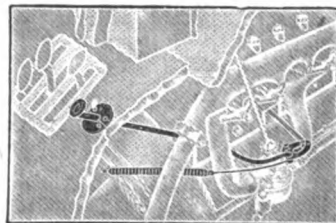
Kraeuter Scrapers

## KRAEUTER CURVED BEARING SCRAPERS

These bearing scrapers have the flat under side depressed ¼ in., the cutting edges being 1/16 in. wide so that they can be sharpened with a few rubs on an oil stone. Made of English file steel, hardened and tempered and packed in sets of three different sizes or three of the same size. Lengths 10, 12 and 13 in.—Kraeuter & Co., Inc., 569-585 Eighteenth Avenue, Newark, N. J.

## UNIVERSAL DISPLAYERS

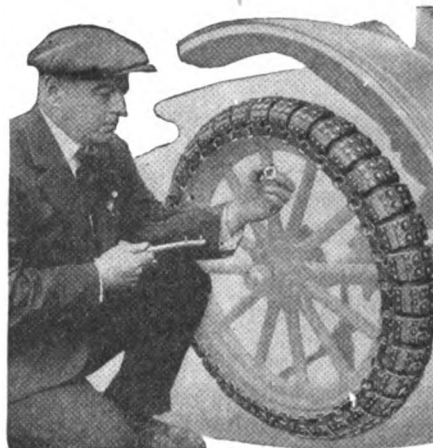
These are devices for displaying maps, charts, curves, plans, production figures, engineering details, etc., the displays being mounted either on the wall or on stands to be set or attached to the floor. Made in all different styles and sizes for different purposes. The wings are made of polished steel tubing with electrically welded steel channel frames on the inside. The filler is of asphaltum wall board. All metal parts are finished in double baked ebony enamel.—Universal Fixture Corp., 133 West Twenty-third Street, New York City.

Universal  
Displayer

Ewald Foot Accelerator

EDELMANN FOUR-IN-ONE  
SCREWDRIVER

This is a small screwdriver with four blades of different sizes, the blades nesting one inside the other, and the outer or largest one protected with a shield. The blades are of a size suitable for work on magnetos, coils, carbureters, etc. The outside dimensions are  $6 \times \frac{1}{4}$  in. and the weight is 3 oz. Price 75 cents.—E. Edelmänn & Co., 341-363 East Ohio Street, Chicago.

4-In-1  
Screwdriver

Highway Tire Protector

HALLADAY UNDERFRAME  
CLAMP BUMPER

This is a universal bumper which is secured to the under side of the frame extension by two clamps of such design that they instantly conform with any angle or curve of the frame. The side bars are heavy steel, with the spring carriers of the rigid bar type or the bar clamp of the spring bar pattern riveted thereto.—L. P. Halladay Co., 501 North Monroe Street, Streator, Ill.



Halladay Underframe Clamp Bumper

## MIRACLE OIL

This is a light oil intended to be mixed with the gasoline in the tank and is designed to prevent the formation of carbon by preventing the conditions that cause carbon, that is, leaky rings and scored cylinders. The oil, which is a lubricant, is taken into the intake manifold with the gas, and lubricates the upper part of the cylinder wall and the valve stem guides on a new engine and in this way prevents wear which would admit quantities of oil later and this in turn would form carbon. Put up in cans containing 1 qt. \$2, 1 gal. \$7.50, 5 gal. \$35.—Desmond Mfg. Co., 346 Atlantic Avenue, Brooklyn, N. Y.

EWALD FOOT ACCELERATOR  
FOR FORD CARS

This is a foot accelerator for Ford cars, the foot pedal of which is mounted on the floor-board, pushing directly against the plate which is installed on the throttle of the carburetor. There are no bell cranks or joints, and the device can be installed in a short time without extra tools. Price 75 cents.—Ewald Novelty Works, Oakfield, Wis.

HIGHWAY TIRE PRO-  
TECTOR

This is a tire protector of heavy fabric with steel studs and washers riveted on the outside to prevent skidding. The protector is made in sections each one of which goes around the casing, the ends being connected together around the felloe. Made for tires from 28 x 3 in. to 42 x  $5\frac{1}{2}$  in., prices from 9 to \$31.45 per set to fit one tire.—Bukolt Mfg. Co., Stevens Point, Wis.

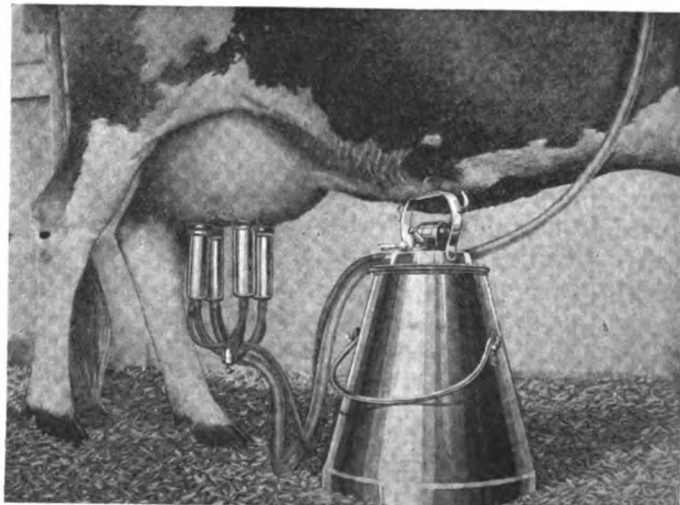
## The Pine Tree Automotive Milker

The Pine Tree Automotive Milker is a mechanical device manufactured by the Pine Tree Milking Co., Nineteenth and California Avenue, Chicago, for milking cows. It is operated either by a gasoline engine or by an electric motor, and it is possible to use an engine which is already in service on the farm or one of the portable motors used in connection with farm lighting plants.

The outfit consists of a vacuum pump, vacuum tank and as many single milking units as are required for the number of cows to be milked. The installation is completed by the necessary air piping between the vacuum tank and the cow stanchions. The teat cup is double acting and the pulsator is detachable from the lid. The entire device is easy to clean and keep in sanitary condition.

The price of the outfit ranges from \$275 to \$500 or even higher depending on the size of the installation. A credit scheme by which the farmer pays a small cash deposit and easy payments for the balance is assumed by the manufacturer. The farmer's notes are taken by the maker and the dealer does not carry the credit.

It is stated that the milker will milk thirty cows in 1 hr., the average number of ten cows in 1 hr. being customary in hand milking.





# Back to Business—and Start the New Era Right Sell Repairs Intelligently

## A FLAT PRICE FOR EVERY OPERATION

By This Method the Cadillac Motor Co. of Denver Has

- 1—*Eliminated Complaints by Customers*
- 2—*Made Its Shop Pay a Good Profit*
- 3—*Made It Possible to Collect Bills of \$600  
and \$700 Without Disputes with Customers*

THE Cadillac Motor Co. of Denver has solved its repair-shop problem. It no longer has disputes with customers, its shop pays and it is getting \$1.50 an hour for labor where it used to get \$1, yet it has not announced to the customers a raise in price.

By a long series of tests it found a standard price for every detailed job, and by adding these detailed prices together it is able to estimate safely the cost of a complete job of overhauling.

It has found, states General Manager P. E. Chamberlain, that the big trouble it used to have was caused by the fact that the repairing was not sold to the owner when the car went into the shop. The selling was done only after the shop had done the job and incurred an expense, and then if the customer refused to be sold there were disputes and adjustments and often a loss to the company.

Furthermore, the new system has sold the employees on efficient work. Jobs are done in less time and every job yields a profit. Often the customer is pleasantly surprised when the final bill proves to be 15 or 20 per cent less than the estimate.

That all shops can follow this plan with the same results is asserted by Chamberlain, who states that the time is coming—is almost here—when repairing is going to be intelligently sold and a profit made, or the inefficient shops are going out of business.

"A majority of repairshops to the contrary notwithstanding," he states, "it

IS possible for any one of them to place themselves on a 'flat rate' basis for labor. However, it cannot be done until the proper records and statistics have been kept.

"It is a ticklish matter to give our prices to another shop since our standard may be higher or lower than that necessary for another shop to work under. If, owing to certain local conditions, it costs us 10 per cent more to do our work, then our prices must be correspondingly higher, and it does not affect us that New York or St. Louis can do it cheaper.

"To the best of our knowledge we are pioneers in this flat-rate work among repairshops working on high-grade cars. I am convinced that it is the only plan under which repairing can ever be done without the friction over charges and all the other misunderstandings which are familiar to all of us.

"I was prompted to begin this work in an effort to eliminate complaints about repair bills. Of course, if the price of each labor operation could be given to the customer in advance he would either give us or not give us his order. If we secured the order there would be no complaint on the charges, since he knew what the bill was to be.

"As a starter I investigated our bills and complaints. I found that 77 per cent of the jobs done after verbal estimates had been given by the shop foreman or other technical man gave the company a loss. In one case this loss amounted to over \$700. I kept a complaint book and from it in course of time learned that



P. E. CHAMBERLAIN  
Manager of the Cadillac Motor Co.  
of Denver, who worked out the  
method described in this story.

## Some of the Flat-Rate Jobs and Their Prices

*This Is the Form in Which Flat-Rates Are Put Before the Organization in the Denver Cadillac Sales Manual*

REPAIR DEPARTMENT—Continued		
Op. No.	Description	Price
103	Oil Leaks—Examine for and Repair	\$3.00
104	Oil Pressure—Regulate	1.50
105	Oil Relief Valve—Repair	2.00
106	Oil Indicator—Install New Glass	1.00
107	Oil Indicator—Repair	2.50
108	Oil Manifolds—Install	2.50
This price applies only if done in connection with changing chains and sprockets (97).		
109	Oiling System—Test Under Pressure	\$7.00
Includes taking down, clean, put back motor pan, changing motor oil.		
110	Oil—Motor Uses Too Much	\$50.00
Includes examining for oil leaks and repairing, test entire oil system under pressure, regulate oil pressure, examine and adjust all main bearings, examine and adjust single end connecting rod bearings, examine and adjust double end connecting rod bearings, measure cylinders and pistons and report, fit new C. R. bearings if needed.		
(No guarantee that this will correct the trouble, as other things may be needed, such as blocks or new pistons.)		

### P

111	Pan, Dirt—Take Down, Clean, Put Back	\$1.00
112	Pan, Motor—Take Down, Clean, Put Back	4.25
Includes cleaning oil screen and taking off dirt pan.		
113	Pan, Motor or Dirt—Straighten	
114	Pistons—Fit New Rings	\$5.00
This price applies only if done in connection with No. 110 (Motor uses too much oil).		
115	Pistons—Drill Six Holes in Each	\$4.00
This price applies only if done in connection with No. 110 (Motor uses too much oil).		

116	Pistons—Install New	\$5.00
This price applies only if done in connection with No. 110 (Motor uses too much oil).		
As a separate job the price is \$22.50.		

### R

117	Radiator—Drain and Refill	\$0.25
118	Radiator—Flush	.25
119	Radiator—Remove	3.50
Includes drain and refill radiator, remove and put back lamps, remove and put back hose connections. (One or more new hose connections usually needed.)		
120	Radiator—Repair	\$3.50
Outside work additional.		
121	Rims—True Up One	.50
122	Rims—Weld on New Driving Lug	1.50

### REPAIR DEPARTMENT—Continued

Op. No.	Description	Price
87	Hub Caps—Tighten One	\$0.25
Add 25c. for each additional.		
88	Hub Caps—Install Band on One	.50
Add 50c. for each additional.		

### I

89	Ignition—Install New Resistance Unit	1.50
90	Inspection—Regular, with written report	5.00
(Does not include oiling. No responsibility assumed for condition of car except as regular report covers. No report given on alcohol or parts of car requiring disassembling in order to inspect.)		
91	Ignition—Check Up System	\$2.50
(Includes minor repairs.)		

### L

92	Lamps—Install New Lens in One	.40
Two		.80
93	Lamps—Miscellaneous Repairs	
94	Lighting System—Minor Repairs	2.00

### M

95	Manifold—Repair Leaks	2.50
96	Motor—Clean	2.00
97	Motor Chains and Sprockets—Install New	16.00
(Includes installing new fan bearings if found to be necessary.)		
Includes drain, remove and refill radiator, remove and put back lamps, remove and put back hose connections, take down and put back dirt pan.		

98	Motor—Renew	\$160.00
Includes changing cylinder blocks, adjusting main bearings, adjust connecting rod bearings, install new C. R. bearings as needed, test for oil leaks under pressure and repair, install new motor chains and sprockets, install new fan shaft bearings if needed, overhaul rocker plate, overhaul generator, overhaul carburetor, overhaul distributor.		
(No responsibility assumed for proper operation of motor beyond above work.)		
99	Muffler—Clean Out One	\$2.50
Both		5.00

100	Muffler—Repair	
-----	----------------	--

### O

101	Oil—Change in Motor	.50
Includes washing out.		
102	Oil Car All Over	2.00
Does not include changing oil in motor.		

our complaints were divided about as follows:

Charges for repair work too high	90%
Work improperly done	5%
Various other causes	2%

"This gave me a basis upon which to work. I knew, first—that a shop foreman or other technical man was not competent to price a job of work. This statement will be disputed by some, but it is a fact nevertheless. Such a man may happen to come out on the right side, but at best his estimate is a guess and is not based on sound fundamentals which obtain in other lines of business when estimates are given on work. He may know mechanical matters but he cannot be expected to know the financial and sales end of the job with which the whole is so intimately connected.

"Second, that some system must be devised and kept in the office in order to prove out a schedule of flat rates.

"The first plan I adopted was thrown away after sixty days' trial. It gave to each general operation a number. For instance: No. 1 was 'drain and refill radiator.' No. 2 was 'remove radiator,' and so on. The mechanics turned in the starting and finishing time on each operation number on each job.

"Thus my records showed that it took a certain time to 'adjust single and connecting rod bearings' on a certain car, and on another car it took a great deal longer. The reason for this, while not anticipated, was apparent with study.

"It had to do with the way the work was ordered. For instance: If an owner came in for a single end rod adjusting job and nothing else, it took longer to do that job because it involved removing the motor pan and dirt pan, whereas if the bearings were adjusted in connection with other work, say on the pistons, it took a correspondingly smaller amount of time on each because the preliminary work was distributed over both parts.

"This led to the adoption of the 'Operation and Group' plan of keeping records. Any shop can do this, regardless of the number of models it has to work on. Of course, the more kinds of cars the shop works on the more records it will have to keep and the longer it will take to complete them. Otherwise it is as simple as the keeping of ours has been, once I got the proper angle.

"This plan gives every single operation a certain number from 1 up. These numbers are then grouped in accordance with

the way they are performed. Thus on the Cadillac car:

Operation No.	Description of operation.	Group Numbers.
33	Adjust double end connecting rod bearings	5-28-34-33-32-39-40

"From this it is apparent that, in order to adjust these bearings it is necessary to perform all of the operations called for by the group numbers. These operations are, to carry out the illustration:

- 5—Take down and put back dirt pan under front of motor.
- 28—Take down, clean and put back motor pan.
- 32—Adjust single end connecting rod bearings.
- 33—Adjust double end connecting rod bearings. (Objective operation or main job.)
- 34—Take out, clean and put back pistons. (Done because it costs little at this stage and should be done in the interests of good workmanship.)
- 39—True up pistons.
- 40—Straighten and true up connecting rods.

## BACK TO BUSINESS—AND START RIGHT

## The Message to Owners

*Contained in a Booklet Distributed by the Cadillac Motor Co. of Denver Under the Title "Putting a 'Rep' Into Repairs"*

**A**S THE result of a year's careful study we inaugurated on Oct. 1, 1918, the contract method of repairing Cadillac cars. In other words, we have taken our stand with other lines of business which tell a customer in advance what his bill for stated service will be.

That is certainly "Putting a 'Rep' in Repairing." It is casting aside custom, "sight-unseen" methods and eternal arguments. It is putting in their stead business-like methods, satisfactory service and acceptable charges.

To the best of our knowledge we are pioneers among repairshops handling higher priced cars. We are glad of it. We have for a long time recognized the growing demand for modern methods in the automobile repair business. We have kept records in detail covering all angles of the situation. Six months ago we tried to install the new system, but found our records were too incomplete as yet. Three months later we tried again, but after days of work had to abandon the attempt.

At last we have it! We submit it to Cadillac owners in the belief that in connection with our service system it will eliminate all of the objections commonly found to repairshop methods.

If any plan or system is varied or changed at will, it soon loses the respect of customers and employees alike and falls flat. Therefore, we ask the co-operation of Cadillac owners in helping us to observe the few fundamentals given on the opposite page, which are vital to the successful operation of our new Contract Plan of Repairing.

1. All work, material and parts are strictly cash.

2. Prices are for labor only. Parts, material and work sent outside for customers will be charged extra.
3. All prices are subject to change without notice. Work will be accepted at current prices, regardless of previous quotations.
4. Work is done along certain definite lines in accordance with a Standard List of labor operations on file in the Service Office.
5. All repair work is fully guaranteed.
6. Verbal agreements, regardless of their nature, will not be recognized, since full provision is made to put the customer's wants into writing on forms which will insure greatest efficiency.
7. No work will be done in our repair department on time basis in the future, except on four-cylinder cars.
8. Any claims should be made within five days. We cannot assume the blame if car is driven longer than time required to learn that claim is necessary.
9. Small adjustments and garage work will be handled promptly in our Service Department on a time basis at \$1.25 per hour. Please ask for a receipt for money paid for this kind of work.
10. Our repair work on Cadillac cars is done in accordance with a fixed standard which insures competent and thorough work. It will be assumed that all work which we consider necessary to this standard is desired by the customer, unless he leaves specific instructions to the contrary.
11. This change in policy in no way affects sales agreements previously entered into with customers, such as Guarantee on new cars and Inspections.

"It makes no difference whether one or more of these operations are performed in connection with the objective operation or main job used in this illustration or with some other. Whenever No. 5 operation is performed, whether of itself or with work on some other part of the car as the objective point, *it costs so much money to do it and for this the customer should pay.*"

"On the other hand his order may have several operations which, if done separately, would each require doing No. 5. Therefore he should pay once, *but once only.* Now, unless a shop foreman takes the trouble to follow out each operation on the order and write down the several operations, he cannot be sure that his estimate is correct. In addition he loses sight of some cleaner here, some rags there, or some valve compound some place else. He overlooks the time it will take to test the car, his own non-productive salary, etc. With this plan our estimates are made by a girl in the office,

after a technical man has listed the work to be done.

"Whenever an operation is written down the group precedes it on the estimate blank and the operation numbers which come more than once are used but once. (See sample estimate sheet.)

"The mechanic received his order written in the same way and several lists of operations were posted in the shop. They reported start and finish time to the time-keeper on *each individual operation* which the complete job covered. A small time sheet was used for this purpose and the big time sheet checked the job through from start to finish in the old way. The total of the operation sheets must equal the total time on the job, giving us a double check and resulting, incidentally, in the elimination of mistakes in keeping time.

"Thus each job in the shop contributed to our office records. A loose leaf page was kept for each operation and under headings showing name of owner, job

number, workmen, hours, cost of material, cost of parts used, etc., *a detailed record was kept for a year.* Each month these sheets were averaged and careful note taken on fluctuations in time required to do the same work from month to month. These sheets were gone over in detail at the monthly organization meetings until *the workmen themselves became very much interested in the figures.* These figures were used in giving customers written estimates, although the work up to Oct. 1 was always done on a time basis.

"During this year I was able to gather much interesting information. *I found that we could collect bills running to \$600 or \$700, including paint and trim work, without any argument whatever, whereas such a bill had never been collected before.* This was because the amount was *SOLD in advance through an estimate.*

"Our estimates always ran from 15 per cent to 25 per cent more than the

**BACK TO BUSINESS—AND START RIGHT**

[illegible]

Digitized by Google

# The RETAIL NEWS

## New Truck and Tractor Dealers

M. A. Rickard, Corvallis, Ore., Buick, Chevrolet and Studebaker dealer, has added a tractor department with the Sampson tractor and a truck department with the Republic truck.

Whiteside & Locke, Corvallis, Ore., have opened a service station for Fordson tractors and Maxwell trucks.

G. C. Moore, proprietor of the Overland Garage at Corvallis, Ore., has secured the agency for the All Work Tractor and the Lalley farm lighting plant.

The Independence Garage, Inc., G. C. Skinner, proprietor, at Independence, Ore., has added the G. M. C. truck to its line.

Vick Bros., Salem, Ore., distributors of the Fordson tractor for Oregon, have appointed the following retail dealers in various sections of that state: Isaac R. Tower, Marshfield, Ore.; Gates Auto Co., Medford; W. A. Burr, Roseburg; Vick Brothers, Eugene; Whiteside & Locke, Corvallis; W. W. Crawford, Albany; Bridwell & Tillbury, McMinnville; Valley Motor Co., Salem; Otto Erickson & Co., Hillsboro; Francis Motor Car Co., Portland; Pacific Highway Garage, Oregon City; Walther-Williams Co., The Dalles; Simpson Auto Co., Pendleton; Vale Hardware Co., Ontario; L. C. Smith, La Grande; Service Auto & Supply Co., Baker.

The McNeff Tractor Co., Pitcock Building, Portland, Ore., has secured the distributing agency for the Cleveland tractor for the State of Oregon and Washington and has appointed the following dealers: Hood River Garage, Hood River, Ore.; Hubbard Bros., Medford, Ore.; Basche-Sage Hardware Co., Baker, Ore.; H. L. Maker, Prineville, Ore.; George Goodrum, Marshfield, Ore.; G. W. Burnett, Roseburg, Ore.; Southern Oregon Auto Co., Klamath Falls, Ore.; Sweet Drain Auto Co., Eugene, Ore.; H. Pohle & Son, Salem, Ore.; Union Hardware Co., Union, Ore.; Keltner & Skaggs, Enterprise, Ore.; Riddle Hardware Co., Riddle, Ore.; S. M. Rice, Ranier, Ore.; Island City Mercantile & Milling Co., La Grande, Ore.; Peterson Bros., Hillsboro, Ore.; Mt. Angel Garage, Mt. Angel, Ore.; K. Kuppenbender, Tillamook, Ore.; A. Wilhelm & Son, Monroe, Ore.; Edward Seufert, Jr., The Dalles, Ore.; A. W. Ream, Albany, Ore.; W. A. Haskins, Marcus, Wash.; McNeff Bros., Yakima, Wash.; Motor Sales Co., Walla Walla, Wash.; American Automotive Co., Tacoma, Wash., 201 St. Helens Ave.; J. E. Johnson, Grays River, Wash.; Glendale Creamery Co., Chimaquam, Wash.; Farm Motors Co., Pullman, Wash.; Lewis Automotive Co., Bellingham, Wash.; Hubert Remley, Dryden, Wash.; Hancock & Dean, Coupeville, Wash.; Lang Motor Co., Kent, Wash.; M. E. & E. T. Hay, Wilbur, Wash.; McNeff Brothers, Seattle, Wash.; McNeff Brothers, Spokane, Wash.

The Francis Motor Car Co., at 703 Hawthorne Avenue, Portland, Ore., has been appointed distributor for the Fordson tractor in Multnomah County.

The Cook & Gill Co., Inc., Paige dealer in Portland, Ore., has enlarged the salesrooms at 80 North Broadway and added a used car sales department, with H. W. Lyon acting as sales manager. The machine shop and service station operated by the same company at 409 Davis Street has been equipped for truck and tractor service and repair.

Allen & Barnett, Corsicana, Tex., has recently been formed and will handle the agency for the Overland truck and the Bethlehem truck in that territory.

Walter Hughes & Co., motor car, tractor and accessory firm of Danville, Ill., has been dissolved. The stock and goodwill have been purchased from J. R. Bouchiere and other interests by a new company, of which Fred Hughes is the leading spirit. Reorganization plans are now under way. The new concern will be distributors for the Reo motor cars and trucks, Cleveland tractors and Oliver plows and discs.

The Badger State Sales Co., Milwaukee, Wis., state distributor of the Master truck, has moved from 439-441 Prospect Avenue to 134-136 Oneida Street. Its former location has been turned over to the Government as an auxiliary to the hospital established in the Ford assembling plant at Milwaukee.

Pioneer Automobile Co., Seattle, Tom Fletcher, president, distributor for the Case "6" and Columbia trucks, has taken over the agency for Western Washington for the Case tractor and farming machinery.

## Developments in Garage and Repairshop

The Mitchell Auto Sales Co., Madison, Wis., has moved its garage, repairshop and display rooms to the Kehoe Building, 112-114 South Franklin Street, in order to gain more room. The company is dealer in the Mitchell, Farmer Boy tractor and the Selden truck.

The Ross Motor Car Co., Superior, Wis., a pioneer dealer of the Northwest, has disposed of its business because of the desire of Lee L. Ross, proprietor, to retire. O. S. Caesar has taken over the Dodge and Studebaker dealerships, repairshop and accessory business, and will conduct it in the Ross building as the Caesar Motor Co. The tire repair department will be operated by R. C. Clemans under the style of Clem's Tire Shop.

Ray Welch, Oconomowoc, Wis., proprietor of the Welch Garage, is making extensive repairs to the building, which was badly damaged by fire late in September. The improvements and additional equipment will cost about \$7,500.

The T. J. Kelly Co., Peoria, Ill., which had outgrown its former quarters at 715 Adams Street, has opened a new garage and sales agency at 324-328 South Jefferson Street. The new building is of fireproof construction, has a frontage of 75 ft. and has two stories. The upper will be utilized as a paint shop and used car department.

Walter Schade, Manhattan, Kan., has purchased battery service plant of W. E. Sweezy, of the Everready office, and has transferred it to his garage. John Compton of Junction City will have charge of the new department.

The Allen Hays Auto Co., Topeka, Kan., has consolidated its shop with the service station of the Overland-Wierenga Co. and is now located at 914 Kansas Avenue. Allen Hays is proprietor.

Rauch & Long, electric agency, Wichita, Kan., has leased the new salesroom now being completed by S. G. Bond for W. S. Brown, and will take possession as soon as it is finished. John Peirle, the company's agent, will manage the Wichita agency and has arrived to take charge.

The Amsterdam Garage, Amsterdam, Mo., has moved into its new fireproof building. Messrs. Thornbrugh, Crumley and Finley are the owners.

E. L. Eads, Savannah, Mo., will soon open an automobile accessory shop on the west side.

The Purdy Motor Co., Tulsa, Okla., will erect a \$2,000 filling station.

Denty & Jackson, McAlester, Okla., have opened a new vulcanizing and tire repair-shop.

The W. F. Britton Motors Co., Dallas, Texas, distributor of Reo cars and trucks, is now located in new quarters at 2219-21 Commerce Street. The new location is a two-story building with a floor space of 60 x 100.

The Texas Auto Top & Painting Co., Dallas, Tex., has leased the storeroom at the corner of Main and Preston streets.

The Texas Bethlehem Sales Co., Dallas, Tex., leased the storeroom at 1304-6 Young Street to the Modern Auto Parts Co., of St. Louis, for a term of eighteen months at a consideration of \$2,700.

The Douglas Motor Car Co., Waxahatchie, Texas, has purchased the entire stock of cars, parts, machinery and equipment of the Bruton Motor Car Co. and moved to the building on Main and Monroe streets, where it will conduct a general Chevrolet service station.

Joe Hemmy, Abilene, Kan., has opened a new repairshop in the Babcock Blacksmith Shop, in Holland, Kan., under the name of the Grand Leader Garage.

Vere Hollenbeck, Arkansas City, Kan., is planning to erect a new garage of cement blocks where his building burned recently, on South Summit Street. The Empire Company will lease the building from him. The new building is to cost about \$1,200.

The Allison Vulcanizing Plant, Baxter Springs, Kan., was completely destroyed by fire recently.

Frank Loeser, Eldorado, Kan., of the Loeser Motor Co., has purchased the tire business of the Varnum Tire Service and will conduct this new business along with his regular line.

The Midland Refining Co., Eldorado, Kan., has opened a new filling station, on South Main Street.

Craig & Sawyer, Garnett, Kan., have moved from the south side to the K. of P. building, where they will add to their equipment an oil and gasoline depot.

W. A. Kuhlman has purchased the Murraymead Garage at 717 Hawthorne Avenue, Portland, Ore., and added a complete line of passenger car and motor truck accessories.

Kimball Horne Motor Co., Seattle, has opened headquarters at 915 East Pike, and will handle the Apperson line.

The Salem Automobile Co., Inc., has leased and is remodelling the two story, 50 x 100, building at 151 North High Street, Salem, Ore., as a sales and service station for the Hudson, Chevrolet and Scripps-Booth cars. Accessories will be carried and the company will act as jobbers for Republic tires in Polk, Marion and Linn Counties.

A. G. Held, Corvallis, Ore., has opened Hupmobile salesrooms and service station.

R. G. Edgerton & Co. have established their third branch at 623 Main Street, Lynchburg, Va., for the purpose of handling Reo interest in Virginia, a part of West Virginia, Tennessee and North Carolina. W. C. Crews, formerly identified with Saxon, King, G. M. C., Chalmers, Maxwell and Stewart interests, has been appointed manager in charge.

## New Garages

E. G. Collins.....Arkansas City, Kan.  
White Front Garage—Frank C. Snell  
Le Roy, Kan.  
Hargiss Garage.....Pittsburg, Kan.  
Al Fishburn.....Marion, Kan.  
New Super-Garage.....Pittsburg, Kan.  
Bowman Brothers.....Savannah, Mo.  
Borgess, Cobb, Lightburne.....Liberty, Nev.  
City Garage.....Little Rock, Ark.  
Bishop Garage.....Chagrin Falls, Ohio



# Makers Vote Against National Shows

*Impossible to Prepare Models for a Suitable Exposition—  
Sentiment Strong for Local Dealer Shows—Car Prices  
Likely to Remain at Present Levels*

WASHINGTON, Nov. 18.—There will be no National automobile shows in New York and Chicago this winter. But in all probability there will be local dealer shows in many of the larger cities.

The National Automobile Chamber of Commerce met in Washington yesterday and decided against the National shows. Although there is no official sentiment against such shows, the manufacturers felt that it would not be possible to prepare new models for a show that would be truly representative of the industry and which would reflect the great victory that represents the passing of the Central Powers.

But the sentiment at the meeting, insofar as dealers are concerned and as expressed by President Vesper of the National Automotive Dealers' Association, much in favor of local shows.

Pittsburgh has a show on at the present time and it is proving a wonderful business stimulant.

The directors of the Chicago Automobile Trade Association sent a resolution to Washington in favor of the Chicago dealers' association having a real part in any future shows that may be put on in that city.

Boston is considering show. Hartford is looking over the situation and is in favor of a show. Kansas City is making such preparations.

The general feeling is that the lid is off on local shows and it is likely that the dealers will go to it strong.

This means that the National Association of Automobile Show Managers which meets next Monday and Tuesday in Cleveland will have some important work on its hands.

At the N. A. C. C. meeting President Charles Clifton occupied the chair and practically every big motor company was represented, including Packard, Pierce, Locomobile, Paige-Detroit, Studebaker, Cadillac, Buick, Chevrolet, Chalmers, Peerless, Overland, Cole, Hudson, Hupmobile, Maxwell, Kissel, Reo, Mitchell, Briscoe, Liberty, Premier, Lexington, Oldsmobile and Stutz.

It developed at the meeting that the normal production of passenger cars for 1918 would have been 2,000,000 as against the 1,718,000 produced in 1917. The output was curtailed 30 per cent in March and 50 per cent in July so that under these reductions the output for 1918 will

be slightly under 1,000,000 making an artificial shortage of 1,000,000 cars.

As rapidly as possible the industry will get back to normal but it is said that full production will not be met until sometime next spring.

Prices of cars will probably remain at present levels in most instances owing to the high prices maintaining for material and labor and also that reductions can only come with increased production.

Truck production, greatly stimulated by the war in the first part of the year, was held to approximately the same production as last year for the last half so that the production for the later period was 80,000 trucks. Last year's output was 160,000.

It was shown that the industry has contributed more toward victory than any other except the steel industry. It took on more than \$1,000,000,000 worth of war work for not only trucks, airplanes, cars and trailers, but also for shells, helmets, sub-chasers and other things not related to automobiles. In addition it contributed thousands of valuable mechanics and engineers.

With reversion to peace production it is anticipated that exports will greatly increase. It has been impossible to fill export orders during the past year due to war conditions and regulations and there is a huge demand in foreign countries now waiting fulfillment.

The keynote of the general discussion involved suggestions that the elimination of war work should progress with a constant view as to the effect on labor; that contracts should be cancelled in proportion to the growing capabilities of the plans to assimilate the war workers for peace time employment.

A suggestion that the War Industries Board should become a Peace Industries Board and act as a balance wheel in the conversion was approved and committees were appointed to co-operate in this work.

The passenger car committee will be R. B. Jackson of Hudson, A. I. Phelps of Dodge and H. H. Rice of Chevrolet and the motor truck committee will be George M. Graham of Pierce, Windsor T. White of White and R. H. Boyston of Service.

## *Strike Out Tax on Parts*

Senate Finance Committee Eliminates It From  
War Revenue Bill—N.A.C.C. to Ask That  
Vehicle Tax Be Eliminated

WASHINGTON, Nov. 18.—Dealers will not be required to pay a tax on parts they have in stock.

The Senate Finance Committee has stricken from the War Revenue Bill the clause that would have placed a tax of 5 per cent on every dollar's worth of spare parts held in stock by thousands of dealers all over the country.

The National Automobile Chamber of Commerce now proposes to ask Congress to cut out the 5 per cent tax on the sale price of cars and trucks and also the general tax to be paid by owners on the grounds that such vehicles already have demonstrated their essential character in the war; and further, that such taxes would pre-

vent quick resumption of quantity production and operate as a brake on sales.

The 5 per cent tax on parts which has been stricken from the bill would have required dealers to pay to the government 5 per cent of the selling price of every part in stock, regardless of how long it has been in stock, or when it is sold. The manifest unfairness of the measure was protested both by the N. A. C. C. and the N. A. D. A. The action of the Senate Finance Committee is not final, but inasmuch as the wishes of this body seldom are not respected, it is considered practically certain that Congress will agree and that the tax will be no more.

## Canada Imposes Drastic Gasoline Regulations

### Dealers, Garages and Filling Stations Threaten to Stop Sales If Enforced

OTTAWA, ONT., Nov. 14—Canadian garages, dealers and filling stations are up in arms over the recent ruling of the controller which prescribes lengthy regulations regarding the storage and sale of gasoline and limits the profit of the dealer to 10 per cent. Recently the dealers have decided in many cases to close their filling stations and to cut out the sale of gasoline entirely until the profit restricting measure is rescinded. Following are the regulations which have been approved by the Governor General in Council and control both wholesale and retail sales of gasoline in Canada:

1. Every person who sells gasoline in Canada shall be deemed to be a dealer under these regulations.

2. Any person now engaged in or who desires to engage in the business of selling gasoline shall forthwith apply to the Fuel Controller by registered letter in Form "B" for a permit in Form "A", accompanied by the proper fee for such permit.

3. Any dealer carrying on business and accepting or filling orders for gasoline in more than one office or who maintains one or more branch offices or supply stations for wholesale or retail trade within the same municipality or in other municipalities shall secure a permit for each separate place of business where gasoline is sold or orders therefore are accepted.

4. Any such permit issued subsequent to the first day of October in any year shall be valid for the remainder of such year and also for the whole of the succeeding calendar year.

5. Fees for gasoline dealers' permits to be charged by the Fuel Controller shall be based on the volume of sales made by the applicant during the previous calendar year. Where such sales amounted to:

- (a) Less than 1000 gal., \$2.
- (b) 1000 to 5000 gal., \$4.
- (c) 5000 to 10,000 gal., \$10.
- (e) 15,000 to 20,000 gal., \$15.
- (f) 20,000 to 40,000 gal., \$25.
- (g) 40,000 to 70,000 gal., \$55.
- (h) 70,000 to 100,000 gal., \$75.

(i) For every additional 100,000 gal. or part of 100,000 gal. the sum of \$75 until a maximum of \$600 is reached.

6. A dealer's permit may be issued to any provision of the law or any director in writness of selling gasoline during any period of the previous calendar year on payment of the minimum fee herein prescribed.

7. In case any dealer fails to obey any provision of the law or any direction in writing issued by the Fuel Controller, or is found guilty of having given short measure or in case there is other sufficient cause as to which the Fuel Controller shall be the sole judge the said Fuel Controller may forthwith suspend for any stated period, or may cancel any permit issued by him upon giving notice to the permittee by registered letter and may afterwards renew such permit as he may in his discretion see fit.

8. Any person who commences or continues

to deal in gasoline without having made application for a permit as herein provided, or who has been notified by registered letter by the Fuel Controller that the said application has not been approved, or that any permit issued to him by the Fuel Controller has been suspended or cancelled shall on summary conviction be subject to the penalty imposed under paragraph 17 of these regulations. A penalty not exceeding \$50 for each day such business is conducted in contravention of these regulations may also be imposed.

9. Every dealer shall keep a record showing volume in gallons of daily sales of gasoline, which record shall be available during regular business hours for inspection by any person authorized in writing by the Fuel Controller to make such inspection.

10. No retailer of gasoline selling 1000 gallons a month or more shall charge, at retail, more than 10 per centum above the wholesale price of such gasoline laid down at his premises, excepting that in any case where the 10 per centum would involve a fraction of a cent, the retail price shall be the nearest whole number of cents to the amount called for by this rule, as in any case where the 10 per centum would involve an even half of a cent the retail price shall be the nearest whole number of cents below the amount called for by this rule.

11. Immediately upon receipt of the official permit every dealer shall expose the same in a prominent place in his office or place of business.

12. Every dealer shall display prominently upon his business stationery, including letterheads and receipt and account forms, the words "Fuel Controller's Gasoline Dealer's Permit No. —," followed by the official number of such permit.

13. Every retail dealer shall display in a conspicuous place on his premises, readily visible to purchasers, a notice or bulletin clearly setting forth the wholesale and retail prices at which gasoline is being purchased and sold.

### Kansas City Tractor Show in February

KANSAS CITY, Nov. 16—The National Tractor Show will be held in Kansas City, probably in February. Definite arrangements have not been made as to building or details, the event having been called off while fighting was in progress in Europe, and the officials having now to plan the show complete. Tractor dealers and distributors are intensely enthusiastic concerning the show.

### Wichita Tractor Show to Be Housed

WICHITA, KAN., Nov. 1—The Eighteenth Annual Tractor and Thresher Show will be held in this city Feb. 18-22 in the Forum and Annexes. In previous years this exposition had been largely in the open, and while this worked out all right for those exhibitors who had local salesrooms, it was a hardship to those who had no such representation on account of the severity of the weather at that time of the year. The buildings which have been secured for next year are of concrete and brick and about a half block of ground area is available, some of it consisting of two floors. As in the past, the management is in the hands of the Wichita Thresher and Tractor Club.

## Rebuild Army Trucks for Mail After War

### Trucks Are Proving Cheap Carriers and Army's Supply Will Prove Beginning for Big Fleet

WASHINGTON, Nov. 14—Cross country operation of mail motor trucks is proving very successful, according to James I. Blakslee, Fourth Assistant Postmaster General.

One truck route between Washington and Philadelphia, without direct rail connections and costing \$800 monthly for operation, has in 8 months paid a monthly revenue of \$16,000. Another route into Washington, where 28 parcels daily were moved in the first month, now shows a ton of traffic each way in every 24 hours.

Seventy lines now operate over the country, all but one east of the Mississippi River, and plans are being made for a complete system that presents visions of \$360,000,000 yearly revenue, this amount being estimated provided the entire country is once properly established with a network of roads and truck routes.

*Blakslee plans to rebuild the thousands of Army trucks now in France, after the war, and to utilize these also for this work.*

Nine million dollars has been asked of Congress for next year's appropriations for the development of the mail truck routes. Three hundred thousand dollars was allowed this year. Even this small amount if it could be combined with the revenue that would accrue from the establishment of the routes would be sufficient. However, it is expected that the revenue will continue to be diverted to the general Post Office funds and that instead Congress will pass the \$9,000,000 appropriation.

### Accessories Business Association Meets

PHILADELPHIA, Nov. 16—Election of officers and directors and pledge of members to urge that the 5 per cent floor tax levied on the sale of goods now on hand rather than on the inventory of goods, were the high lights of the annual meeting of the Automobile Accessories Business Association at the Adelphia Hotel.

This proposed tax, now in House Bill No. 12863 before Congress, if passed this month becomes effective after Jan. 1, so that it would be necessary for jobbers and dealers to take an inventory before the first of the year. There is general opposition in this branch of the motor car trade to this proviso in the revenue bill. It was decided that each member shall get in touch with his Senator and Congressman and state the attitude of the association with regard to the measure.

Elections resulted as follows: W. H. Metcalf, manager of the Wire Wheel Corporation of America, was re-elected president; Garfield List, district manager of the United States Tire Co., vice-president; A. W. Stellwag of the Metropolitan Auto Supply Co., secretary; N. A. Petry, president of the N. A. Petry Co., treasurer.

Directors: James J. Bradburn of the B. F. Goodrich Co.; D. D. F. Yard, district manager of the Pennsylvania Rubber Co.; J. W. Nock of the George W. Nock Co., and Walter T. Bosworth, manager of the automobile department of N. Sneldenburg Co.

#### Moock Gives Out Good News

ST. LOUIS, Nov. 18—One of the cheering bits of information that reached Harry G. Moock of the N. A. D. A. this week was a letter from H. P. Carter, a distributor of Milwaukee, which inclosed the last applications for memberships from Carter's dealers, making his list 100 per cent. Carter was the second to claim that classification, George McCutcheon of Atlanta scoring the high mark a few weeks ago.

Moock this week sent a hurry-up bulletin to all members, telling them exactly the conditions of the relaxing of the restrictions on the manufacturers of passenger cars. His message came from President Vesper in Washington as follows:

"Judge Parker, priority commissioner, advises that, on account of favorable war developments, restrictions on passenger automobile industry are so modified that for the last six months of 1918 the production of this industry will be on a basis not exceeding 37½ per cent of the 1917 production instead of 25 per cent as heretofore. In all other respects the rules remain the same."

The next N. A. D. A. Members Bulletin will contain some good news of motor car dealers behind good roads movements and also the Missouri Lien Law, which is recommended as a good thing for dealers in other states to get behind.

Manager Moock's idea is that motor car dealers must take the leadership in these things, because they are of more interest to them than to any other persons and no one else is going to do this work for them.

#### Crude Rubber Imports Increase

NEW YORK, Nov. 15—Imports of crude rubber took a considerable spurt during the month of October, the total tonnage coming in being 4358 greater than came in during September. October of this year shows a loss of 461 tons imported as compared with last October, though the total for the year up to date is slowly catching up to the total for the same period last year.

During the first ten months of 1917 the total of 145,295 tons of crude was imported. During the same period this year imports totalled 140,641 tons, the difference being 4654 tons.

## Accessory Trade Boom in Kansas Territory

### Jobbers Report Business Increases Four or Five Fold—Dealers Wire for Supplies

KANSAS CITY, Nov. 16—Many garagemen of Kansas City territory began Monday, Nov. 11—those that could spare time from celebrating—to wire for accessories. The trade of some jobbers was increased that week four and five fold over the average of the past few months.

Reports indicate that most accessory dealers of the smaller towns have allowed their stocks to run low. Fully 80 per cent of the garagemen of the states around Kansas City, one jobber estimates, were within the limits of the latest draft, and did not keep their stocks up because they believed they might be called for service. These men must now restock; but in most cases they had not allowed their trade to lapse, keeping their business going to the last minute.

A few garagemen and accessory dealers have for other reasons allowed their stocks to dwindle, most instances being those who have not kept after business and have allowed other institutions to get their trade. A majority of the larger accessory houses and institutions handling accessories as side lines seem to be fairly well stocked, and are anticipating a largely increased trade. The jobbers appear to have an abundance of supplies.

"Only within the past few weeks have we had any difficulty in getting supplies," said one large dealer. "We are well fixed to care for an increased trade."

"Accessories are generally already bought or contracted for in this territory," said another jobber. "Many dealers are overstocked; it will be easy to get stuff. But the stock of the small dealer is low."

"There will undoubtedly be a good trade for all dealers, it seems to me," said E. J. Hess of the Equipment Co. "Many owners have neglected to spend money on their cars—perhaps because the cost was greater. There may be an easing up in prices in some respects. But the most important incentive will be the lack of restraint on expenditures. Owners who have hesitated to pay \$1 or \$1.50 an hour for repair work will undoubtedly now get such work done. There will be a greater use of cars."

An indication of the large industrial expansion that will immediately follow fighting is the purpose of Kansas City firms to add to their lines at once. One accessory dealer has been holding off a manufacturing enterprise for several months; he will now establish a factory to produce a new accessory.

Collections in the accessory trade have been slow for the past few weeks. This is due to the influenza epidemic, to the many loan and other drives, and perhaps

to the increasing uncertainty as to the length of and the effects of the war. Creditors, however, are not uneasy over the collections, which they say will undoubtedly improve now. There is in the list of accounts a smaller proportion than usual of bad debts, with the exception of debts by men who have gone to war, where collections may be slower because of routine in getting at sources of payment. The slow paying, however, puts a heavier burden on dealer and jobber at a time when the money could be used for expansion.

#### St. Louis to Meet Soon

ST. LOUIS, Nov. 18—The influenza quarantine, which has prohibited all business meetings and for four days shut up even automobile salesrooms, was entirely canceled during last week.

As a result an early meeting of the St. Louis Automobile Manufacturers' and Dealers' Association will be called and probably the first order of business will be a discussion of the prospects of holding a show next spring. This action will be entirely independent of the National Shows. Local men believe that they will get cars from the factory in time to show new models before the selling season opens.

Another result of the end of the war was that the Ford agents here, at least a part of them, came out with advertisements that they had resumed night service.

The first letter received at the N. A. D. A. offices here which referred to the end of the war was from a dealer asking if he could resume 24-hr. service.

#### Boston Dealers Take on Trucks

BOSTON, Nov. 18—Along Boston's Motor Row are quite a few dealers who never until now have handled other than passenger cars but who are now listed as automotive in that they handle trucks. Data as to these trade changes follow:

Frank E. Wing, exclusive dealer for Marmons for some 15 years; never handled either truck or car of any other make; has just taken on Hurlburt truck.

Connell & McKone, exclusive Overland men for years; Atterbury and Bethlehem trucks.

A. H. Sowers, Jackson cars solely for some years; Cleveland tractor and Fulton truck.

J. S. Donovan, Studebaker, now has Sanford truck.

J. M. Linscott, Reo only for years, now interested in Republic, Duplex and Troy trailer.

George H. Leghorn, Hupmobile exclusively; Standard truck.

Chandler Motors of New England, Chandler solely; now has Heath Duplex.

Dunbar, Sanders and Bowen, Oakland only, now Vim truck.

Noyes-Bulck, Buicks, takes over G. M. C. truck.

Mitchell-Lucas, Mitchells only for a long time, now Sullivan truck.

W. L. Russell, Haynes, has taken on Service truck.

New England Velle added Fainier truck.

## Modern Method of Motor Transportation

Conference to Discuss Individual and National Problems Is Held in New York

NEW YORK, Nov. 19—A conference for the benefit of those vitally interested in the solution of their own individual transportation problems and the larger national problems confronting the country at this time is being held at the Broadway showroom of the Colt-Stratton Co. during this week. At the two sessions already held an unusual amount of interest was evinced in the subjects under consideration and the discussion which followed the addresses given served to emphasize the general anxiety for full information regarding up-to-date methods of road transport.

Proceedings commenced Saturday with an address delivered by Major George A. Green of the British Army, who for almost two years has been chief assistant to the chief engineer of the British Tank Corps. He told of the operation of army trucks in France, referring to the fact that the exceptionally good roads made it possible to move enormous quantities of material and hundreds of thousands of troops to threatened points with a maximum of efficiency and a minimum of delay. Major Green emphasized the fact that there was an almost total absence of trouble in transport trucks, stating that except in cases where damage was caused by shell-fire or collision he did not see a truck put out of commission.

Films showing the French Renault miniature tanks operating under abnormal conditions were shown, and it is understood that these will be exhibited at each session during the rest of the week. The films are remarkable in showing what one of these baby or Whippet tanks can do in the way of successfully overcoming natural and artificial obstacles.

The subject set for last night's discussion was that of "The Motor Vehicle in Rural Express" and was introduced by F. W. Fenn of the National Automobile Chamber of Commerce, who has recently visited many rural communities and investigated conditions.

Mr. Fenn outlined the aims and objects of the Rural Motor Express, indicated the sources of its inception and told an interesting story of its rapid development and the enthusiastic manner in which the scheme has been accepted by farmers, dealers and others throughout the country.

In the discussion which followed reference was made to the success achieved by the Post Office in rural transport of parcels post and farm produce. An instance of successful road transportation given was that of the delivery of 500 truck loads of live stock daily to Cincinnati stock yards daily for a considerable time. It was stated that the animals suffered less wastage and arrived at the yard in much better condition than was

the case where railroads were employed to transport them.

Railroad short hauls, that is, hauls up to 50 miles were generally accepted as things of the past, once the Rural Express Lines are operating in accordance with the program proposed. It was indicated that State legislation would in the near future remove the franchise and other disabilities which now hamper the development of road transportation in some districts, that the attitude of the local authorities was generally favorable and that it is expected that a law regulating road freight rates and preventing extortion would be promulgated in New York State.

Much information was asked for regarding operating cost, the most suitable truck capacity for general work, the suitability of trailers, the improvement of roads and the road rates per 100 lb. in comparison with the railroad rates. Mr. Fenn answered in detail and it is understood that the various questions, with many others, will be discussed at length at later sessions.

Subjects listed for the remainder of the week are as follows:

Methods and Devices for Increasing Motor Haulage Efficiency.

The Motor Vehicle in Store-Door Delivery.  
The Motor Vehicle in Inter-City Freight Delivery.

Highway and Street Improvement.  
The Motor Vehicle and the Traffic Problem.

John Eustis is in charge of the conference and it is expected that recognized authorities of National reputation will be available each evening.

### Wholesale Cancellation of Truck Contracts

WASHINGTON, Nov. 19—A wholesale cancellation of truck orders has been made by the Quartermaster Dept., 81,000 vehicles ordered or planned for early order having been canceled.

These include recent contracts placed for 25,000 Class B 3-ton standardized trucks together with the orders placed for the eleven major units which were to be used in building these trucks, and which included axles, motors, wheels, steering gear, transmissions, clutches, universal joints, tires, radiators, frames and springs. Fifty per cent of all the following orders for commercial trucks recently placed and not yet delivered were cancelled: Federal, original order of 500 3½-ton; Federal, 300, 5-ton; Gramm-Bernstein, 100, 3½-ton; Hurlburt, 200, 5-ton; International, 200, 2-ton; International, 800, 2-ton; Kelly-Springfield, 920, 3-ton; Moreland, 40, 2½-ton and 60, 4-ton; Packard, 3000, 3-ton; Peerless, 500, 3-ton; Republic, 250, 5-ton; Standard, 300, 3½-ton; Velie, 125, 3-ton.

Other cancellations include the Kelly-Springfield order for 340, 1½-ton Class A trucks, reduced to 170; Pierce-Arrow order for 1100, 2-ton Class A reduced to 700; The J. C. Wilson contract for 200, 2-ton Class A cut to 100. The Peerless order for 3000, Class A trucks and the Garford order for 4000 Class A trucks have been cancelled. Orders for Nash and F. W. D. trucks have been reduced by 15,000.

## Peace Time Production for Ford Now in Sight

Cancellation of Government Orders Releases 25,000 Cars for Immediate Delivery

DETROIT, Nov. 19—The Ford Motor Co. is to return to a peace-time quantity production basis at the earliest possible moment. Already deliveries of cars have started to dealers and it is expected that a production of 3000 cars per day will be reached very soon.

The Ford company has been producing cars for the government for a long time and it is because practically all of its government contracts have been cancelled that it is possible for the company to commence deliveries practically at once.

There are on hand 25,000 cars contracted for by the Government which the immediately released for dealers and these will be apportioned throughout the United States.

The Ford shops are to return to a peace-time basis as rapidly as possible. The switch over from manufacture of munitions and war supplies already has been started. While this is being completed, the assembly units in various large cities heretofore used by the army will be utilized by the Ford company again almost at once.

### Tennessee Dealers To Meet Nov. 23

MEMPHIS, Nov. 18—Tennessee dealers will meet in convention at Nashville on Nov. 23. President Vesper of the N. A. D. A. and also Secretary Peake will be present. Business sessions will be held at the Commercial Club and it is planned to have an excursion to the Old Hickory Powder plant on the Cumberland River.

### Dearborn Buys Smith Truck

CHICAGO, Nov. 18—The Dearborn Truck Co. has purchased the goodwill and all materials of the Smith Motor Truck Corp. and will remove the equipment to 2515-2515 West 35th Street, where it has recently acquired a new factory building. The Dearborn company has added to its line a complete worm-drive truck in two models of 1½ and 2½ tons capacity and two models of chain-driven trucks in 1 and 2 tons capacity.

### Cadillac First to Reduce Prices

DETROIT, Nov. 18—The Cadillac Motor Car Co. is the first to announce a reduction in its passenger car prices. This is now in effect, the drop being \$300 on all models. Old and new prices, f.o.b. factory, follow:

Model	New Price	Old Price
2-Passenger .....	\$3,220	\$3,520
5-Passenger .....	3,220	3,520
7-Passenger .....	3,220	3,520
Victoria .....	3,615	3,915
Sedan, 6-pass. ....	4,090	4,390
Suburban, 7-pass. ....	4,340	4,640
Coupe .....	4,395	4,695
Landaulet .....	4,495	4,795

# Farm Equipment Makers to Increase Output

## *Government Reduces Restrictions on Iron and Steel, Enabling Production on a Basis of 87% of Normal*

By Fred M. Loomis

OMAHA, Nov. 16—That the government restrictions on iron and steel to manufacturers of farm equipment have been so reduced that manufacturers will be enabled to produce on the basis of 87½ per cent of their normal production for 1918 was the message brought to the Mid-West Implement Dealers Association by Floyd R. Todd at the Friday session of the Tenth Annual Convention of the association. Mr. Todd is vice-president of Deere & Co., Moline, Ill., and is a member of the War Industries Board at Washington. His statement was based upon a telegram just received by him from the War Industries Board and may be regarded as official.

While he did not specifically say so yet the inference is that manufacturers of tractors will be accorded the same privilege given to other manufacturers of farm operative equipment. This is in line with the expectations of the tractor manufacturers who recently secured a revision of the ruling of the Priorities Division of the War Industries Board restricting materials to tractor manufacturers to 75 per cent.

In fact, it remained for a rank outsider to make the only pointed allusion to the tractor business which will go into the records of the association convention. At the closing session of the convention on Friday, John W. Gamble, head of a chemical company in Omaha and chairman of the executive committee of the Omaha Chamber of Commerce, in addressing the association on the subject, "Doing Business on Present Day Prices," called the attention of the retail implement dealers to the growing importance of power farming and the equipment thereof.

*He reminded them emphatically that the tractor was the coming power unit on the farm and that with its sale would go the sale of the power equipment wherewith to conduct modern agricultural operations.*

He reminded the dealers also that *successful business of any magnitude nowadays of whatsoever kind achieves success only through departmentation and specialization.*

He emphatically advised those retail implement dealers who desired to excel in their line of business to adopt modern methods of business organization, department their business, and push each line of trade individually.

He made special mention of the necessity for doing so in connection with the rapidly developing power equipment department of the implement business.

Also he called attention to the preva-

lent laxness of the implement trade relative to housing conditions.

He drew a comparison between the methods employed in the motor car trade where attractive salesrooms and show-windows took the place of the vacant lot or the dingy windows of the ordinary retail implement establishment and asked the question as to which was the more attractive to the buying public.

In the resolution adopted by the association at the closing session, there was the merest reference to the tractor business. This was in a resolution recognizing the growing importance of the power equipment trade and voicing the opinion of the association that the individual members should do all in their power to keep the control of this business in the hands of the regular retail implement dealer.

Aside from the foregoing, the only reference there was made to the tractor business in the proceedings of the convention was a paragraph in the president's annual address and a paragraph in the secretary's annual report. President C. E. Gallagher in his opening address to the convention said:

"I want to call your attention to this (tractors and their accessories) branch of our business as I firmly believe that this is going to be an important branch of the implement dealers' line. We think that the implement dealer is the proper channel through which this branch of farm equipment should be handled and the dealer who does not enter into this game is going to be relegated to the rear ranks. I urge you not to neglect this matter at this meeting."

Secretary James Wallace in his report said:

"Power farming is the biggest innovation that has come into the implement trade in many years and while we realize that from its very nature the implement business is peculiarly adapted to the handling of this branch, other industries are seeking to draw this valuable trade into other channels.

"It must be recognized that where the tractor goes, tractor drawn machinery will naturally follow. This should have serious consideration at this time as the consequences cannot be over-estimated if we allow any great portion of the tractor business to go through any channels other than the retail implement trade."

Despite these admonitions and warnings from the executive officers of the association, the members totally ignored

the subject, as neither the tractor business nor its possibilities were referred to again by any individual speaker or in any of the discussions.

The remarkable fact is that the implement dealer in general views the tractor business as so inherently his by virtue of his being in the implement business that he cannot conceive apparently even the possibility of its passing to any one else.

The mental attitude of the retail implement trade seems to be one of fatuous complacency whenever the tractor business is mentioned. Only here and there is there a dealer to be found who appears to realize the future possibilities of the trade or who has any apprehension lest it be taken away from him by other and more aggressive dealers.

Possibly the neglect of the dealers present at the convention seriously to consider the tractor business was due largely to the fact that practically every member of the association present was an automobile dealer handling farm implements, tractors and motor cars. Not a few have developed a very extensive motor truck trade. Naturally, such dealers do not realize to the same extent the inroads which the motor car dealers are making into the tractor trade because being motor car dealers themselves, the taking on of the tractor appears perfectly natural to them.

The attendance at the convention proved disappointing. At no time during the sessions was the convention hall even sparsely filled, except at the closing session when Mr. Todd, representing the National Implement & Vehicle Association, addressed the convention when all of the traveling men and branch house managers of Omaha crowded into the hall.

There were but three sessions of the convention—one on the afternoon of Wednesday, which was devoted to the annual addresses of the officers and reports of standing committees; one on Thursday forenoon when the time of the convention was taken up largely by an address on the "Outlook for the next Twelve Months," by F. R. Sedenthall of Eau Claire, Wis., and by Will T. Graham of the First Trust Company, Omaha, who gave the dealers some good advice relative to financing their business. The closing session on Friday was devoted to the address on the "Implement Industry" by Mr. Todd, the talk by Mr. Gamble, the report of the convention committees and the election of officers.

The officers for the ensuing year are as follows:

President—Oscar A. Rystrom, Stromsburg, Neb.  
Vice-president—A. W. Dyer, Exeter, Neb.  
Secretary—James Wallace, Council Bluffs, Iowa.  
Treasurer—J. M. Elwell, Springfield, Neb.  
Directors for two years—C. E. Gallagher, Coleridge, Neb.; C. W. Hiscox, Wayne, Neb.; C. A. Windstrand, Wahoo, Neb.

A feature of the convention was the exhibit of farm equipment and tractors in the Municipal auditorium.



## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

Lee Pierce has been made city salesman for the Southwest Nash Motors Co., St. Louis.

J. J. Friede, assistant manager of the Bearings Service Co. branch at St. Louis, has been made manager, vice L. H. Ware, who entered the army. It was the second change made in the management of the branch because of enlistments.

J. J. Gannon of Chicago, better known among the Chicago trade as "The Deacon," has been placed in charge of the Swinehart branch at Kansas City.

Albert Gough is now in charge of the service department of the Liberty Motor Car Co., Detroit. He was formerly connected with the Shaw Electric Crane Co., Muskegon, where he was engaged in production work, and more recently with the service organization of the Chalmers company.

### Browne on Reconstruction Council

MILWAUKEE, WIS., Nov. 18—George W. Browne, one of the leading motor car distributors and dealers of the United States, and distributor of the Overland and Willys-Knight in Wisconsin, has been selected as one of fifty manufacturers, merchants, business and professional men of Milwaukee to serve as a member of the "reconstruction council," a body created by the Milwaukee Association of Commerce to formulate and supervise methods of facilitating the reversion of industry from a war to a peace basis without undue disturbance of the economic equilibrium. The council is composed of representatives of the principal lines of industry. It has been in process of creation for several months, and when it was announced a day after the cessation of hostilities its work already had progressed to a concrete stage. The purpose of the council is to facilitate the readjustment which must follow war, to the end that neither employers nor employees suffer unduly.

### Capt. Clarence F. Smith

LOS ANGELES, Nov. 14—The entire automobile industry here was depressed upon the receipt of news that Capt. Clarence F. Smith, a member of the firm of Smith Bros., one of the oldest and best known motor car firms on the coast had been killed on the battle front in France. Only meager details have been received by his brother Stanley Smith, but it is believed Capt. Smith met death in the Argonne forest charge. Clarence Smith was one of the most popular dealers in Los Angeles. He attended the first officers' training camp held on the coast and got to the front as soon as possible. He had been prominently identified with the Motor Car Dealers' Association, having served as an officer several times and at one time was captain of the drill team, the crack organization of the Shriners.

## Making the Truck Owner a Booster

(Continued from page 15)

The Republic company gives 90 days' free service on new trucks sold and guarantees the trucks for a year, charging only for labor on repairs—not due to accident or misuse—after the three months. This guarantee is now made contingent on the owner's sending in the truck for monthly inspection. Since establishing the free monthly inspection, the cost of free service at the service station has been cut 50 per cent. The cost of the inspection is nominal to the company.

The bringing of the trucks in monthly gives the company a chance to find out many facts as to the handling of the trucks that otherwise might prove serious handicaps to the owners, and adverse factors in sales. For instance, the inspector can in casual conversation discover how the driver stands with reference to overloading and other features of use—which helps to explain frequently the condition of the trucks.

## Sell Repairs Intelligently

(Continued from page 33)

*ductive salaries. Up to a month ago our rates were \$1 an hour, and I do not think we could have raised the 50 cents, as such, without a great deal of friction.*

"I give you below a few prices at random. There are some, such as straightening fenders, usually due to wrecks, which we do not price except on application, but every order must have an operation number and the price before the work goes to the shop. The billing reads the same way:

- 2—Air pressure, regulate.. 2.50
- 11—Axle, rear, build up one shaft ..... 8.00
- 37—Brakes, reline one set..15.00
- 54—Clutch, wash out..... 1.25
- 102—Oil car all over..... 2.00
- 110—Oil, motor uses too much .....50.00
- 191—Wheels, front, line up.. 1.25

"The standard list of operations is arranged alphabetically and numerically and will be corrected monthly until, in the course of time, it will be absolutely right.

## Coming Events

- New York, Nov. 18-23—Conference on Modern Methods of Motor Transportation; Colt-Stratton Co.
- Macon, Ga.—Nov. 19-20—State Fair and tractor demonstrations.
- Nashville, Tenn., Nov. 23—Convention, Tennessee Automobile Dealers.
- Atlantic City, N. J.—Dec. 4, 5, 6—War Emergency and Reconstruction Conference of the War Service Committees.
- Akron, O.—Dec. 5-6—Annual Convention, Ohio Automobile Trade Association.
- 1919
- Kansas City, Mo.—Feb. 10-15—Fourth Annual Tractor Show, Sweeney Bldg., Kansas City Tractor Club.
- Guy H. Hall, Sec.
- Wichita, Kan., Feb. 18-22—Annual Mid-West Tractor & Thresher Show, Wichita Tractor & Thresher Club; Forum.
- New York—Feb. 25-28—American Road Builders' Assn., Sixteenth Annual Convention.
- Montreal, Canada.—April 5-12—Automobile and Used Car Exposition, Windsor Hotel. T. C. Kirby, Show Mgr.

"This is rather a long drawn out proposition. Even so there is much more that I should like to say. The repair business MUST change its methods and I am only too glad to help change them in any way I can, realizing that the quicker the change comes generally the quicker each of us, as individuals, will benefit.

"Some time I would like to present an argument against accepting jobs to 'overhaul,' I would like to tell you why the selling of the work is the most important part of the entire transaction; why it has paid us to keep a clean boy in our shop for no other purpose than to clean cars after the work has been done; why the keeping of time by mechanics punching clocks themselves should be abolished, and many other things.

"There is no end to it and yet it all has to do with methods which in other lines of merchandising have long been accepted as standard and fulfilling the obligation every merchant has to his customers. Why the automobile repair business thinks it can exist with a complete disregard of fundamentals is a mystery to me."

## Keep Your Dealers Up and Going

(Continued from page 23)

during the months to come. We think our dealers are properly trained to grasp this new project without a loss of time."

Some place, probably in the used car trick, is another point. The Overland company has an excellent paint shop, one of those where the machine is kept away from dust and dried in the proper temperature in the proper period of time, so that each car looks like a new car when it is sent out. Every dealer has been introduced to this paint shop and he knows what it can do, for he has sold color jobs from it. Frequently he is reminded of this paint shop and is asked to recommend it to his customers. He is supplied with letters of introduction and when he sends a customer to the shop to have his car painted, he is given a per cent of the bill to pay for his trouble and to induce him to suggest it to more.

"Now our dealers know exactly where they stand for next year," said Henry. "We have told them the situation plainly. Also we are offering them the proper percentage of the cars we are getting. We are urging them to take them and put them in storage. As a result, all cars we have received so far are placed, and the dealer knowing just what he has before him, knows how much money he must earn elsewhere than on car sales and he can get busy.

"We are planning to keep something before him all of the time so that he can keep himself busy for his own profit and for ours. We are making a lot of automotive dealers out of men who formerly sold cars only. I anticipate they will like the change, for a dealer who handles a full line has something to do all of the time and he has a steady profit from some department of his business and very few dull seasons."

# Farm Tractors

ABBREVIATIONS—"W" Wheel, "C" Crawler, "D" Dr., "G" Gasoline, "K" Kerosene, "D" Distillate. Flow capacity varies in relation to operating conditions. Figures are based on 14 in. plows.

# MOTOR WORLD GUIDE

Trucks

Trucks

Name and Model	Tons Capacity	Class Price	Cylinder Bore and Stroke	TIRES	
				F.	R.
A & B	3T 3	.....	4-3 1/2x16 3/4	48x34d	48x34d
A & B	5T 6	.....	4-3 1/2x16 3/4	48x34d	48x34d
Acson	B 1	2300	4-3 1/2x16 3/4	36x5	36x5
Acson	H 2	2500	4-3 1/2x16 3/4	36x5	36x5
Acson	H 3	2700	4-3 1/2x16 3/4	36x5	36x5
Acson	M 5	4700	4-3 1/2x16 3/4	36x5	40x6d
Acson	Light Tractor 6	2050	4-3 1/2x16 3/4	36x5	36x5
Acson	Heavy Tractor 10	4300	4-3 1/2x16 3/4	36x5	36x5
Acme	B 1	1900	4-3 1/2x16 3/4	34x4	34x4
Acme	A 2	2750	4-3 1/2x16 3/4	36x5	36x5
Acme	C 3	3000	4-3 1/2x16 3/4	36x5	40x6d
Acme	D 4	4050	4-3 1/2x16 3/4	36x5	40x6d
American	30 3	3750	4-3 1/2x16 3/4	36x5	36x5
American	D 2	3250	4-3 1/2x16 3/4	36x5	36x5
American	F 5	4750	4-3 1/2x16 3/4	36x5	40x6d
Arnold	HW 2	2000	4-3 1/2x16 3/4	36x5	36x5
Arnold	KW 3	3550	4-3 1/2x16 3/4	36x5	36x5
Atlas	18 1	1135	4-3 1/2x16 3/4	32x4	32x4
Atterbury	7R 1	2575	4-3 1/2x16 3/4	36x5	36x5
Atterbury	7C 2	2975	4-3 1/2x16 3/4	36x5	36x5
Atterbury	7D 3	3075	4-3 1/2x16 3/4	36x5	40x6d
Autowac	21F 2	13075	4-3 1/2x16 3/4	34x5	34x5
Available	1	2250	4-3 1/2x16 3/4	36x5	36x5
Available	2	2500	4-3 1/2x16 3/4	36x5	36x5
Available	3	4200	4-3 1/2x16 3/4	36x5	40x6d
Available	5	4900	4-3 1/2x16 3/4	36x5	40x6d
Beech Creek	3A 3	3850	4-3 1/2x16 3/4	36x5	36x5
Bessmer	H 1	1495	4-3 1/2x16 3/4	34x4	34x4
Bessmer	G 2	2490	4-3 1/2x16 3/4	36x5	36x5
Bessmer	K 3	3450	4-3 1/2x16 3/4	36x5	36x5
Bethlehem	D 1	1765	4-3 1/2x16 3/4	34x4	34x4
Bethlehem	E 2	2165	4-3 1/2x16 3/4	34x4	34x4
Bethlehem	P 3	3295	4-3 1/2x16 3/4	36x5	36x5
Berne Magnetic	VM 2	3500	4-3 1/2x16 3/4	36x5	36x5
Berne Magnetic	HM 3	4200	4-3 1/2x16 3/4	36x5	36x5
Brinton	1	1500	4-3 1/2x16 3/4	32x4	32x4
Brinton	P 2	3000	4-3 1/2x16 3/4	36x5	36x5
Briscoe	4-24	985	4-3 1/2x16 3/4	34x4	34x4
Briscoe	T-34 1	.....	4-3 1/2x16 3/4	34x4	34x4
Brockway	1-2 1	2000	4-3 1/2x16 3/4	36x5	36x5
Brockway	K-2	3000	4-3 1/2x16 3/4	36x5	36x5
Brockway	M 3	3900	4-3 1/2x16 3/4	36x5	36x5
Chase	A 1	1725	4-3 1/2x16 3/4	36x5	36x5
Chase	C 1	2025	4-3 1/2x16 3/4	36x5	36x5
Chase	B 2	2475	4-3 1/2x16 3/4	36x5	36x5
Chase	Y 3	3000	4-3 1/2x16 3/4	36x5	36x5
Chase	O 3	3000	4-3 1/2x16 3/4	36x5	36x5
Cherride	1	125	4-3 1/2x16 3/4	31x4	31x4
Clyde	45 1	.....	4-3 1/2x16 3/4	36x5	36x5
Clyde	45 2	.....	4-3 1/2x16 3/4	36x5	36x5
Clyde	45 3	.....	4-3 1/2x16 3/4	36x5	36x5
Clyde	128 6	.....	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 1	2500	4-3 1/2x16 3/4	34x4	34x4
Garford	65B 1	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 2	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 3	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 4	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 5	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 6	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 7	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 8	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 9	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 10	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 11	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 12	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 13	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 14	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 15	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 16	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 17	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 18	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 19	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 20	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 21	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 22	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 23	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 24	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 25	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 26	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 27	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 28	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 29	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 30	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 31	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 32	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 33	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 34	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 35	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 36	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 37	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 38	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 39	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 40	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 41	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 42	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 43	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 44	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 45	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 46	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 47	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 48	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 49	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 50	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 51	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 52	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 53	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 54	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 55	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 56	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 57	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 58	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 59	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 60	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 61	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 62	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 63	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 64	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 65	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 66	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 67	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 68	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 69	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 70	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 71	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 72	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 73	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 74	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 75	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 76	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 77	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 78	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 79	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 80	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 81	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 82	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 83	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 84	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 85	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 86	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 87	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 88	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 89	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 90	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 91	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 92	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 93	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 94	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 95	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 96	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 97	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 98	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 99	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 100	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 101	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 102	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 103	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 104	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 105	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 106	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 107	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 108	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 109	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 110	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 111	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 112	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 113	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 114	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 115	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 116	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 117	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 118	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 119	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 120	3000	4-3 1/2x16 3/4	36x5	36x5
Garford	75C 121	3000	4-3 1/		

Name and Model	Tons Capacity	Charles Price	Cylinder Body	P.	R.	Tires
Studebaker SP 1	1045	4-31x5	35x41	35x41	35x41	35x41
Studebaker 7 1	1400	4-31x5	36x45	36x45	36x45	36x45
Sullivan P 1	2350	4-31x5	36x45	36x45	36x45	36x45
Self-run E 2	2850	4-41x5	36x45	36x45	36x45	36x45
Superior A 1	1600	4-31x5	34x41	34x41	34x41	34x41
Superior C 2	2200	4-31x5	36x45	36x45	36x45	36x45
Tiffin A 1	1100	4-31x5	35x41	35x41	35x41	35x41
Tiffin GW 1	2075	4-31x5	36x45	36x45	36x45	36x45
Tiffin HW 1	3760	4-41x5	36x45	36x45	36x45	36x45
Tiffin PW 1	3600	4-31x5	36x45	36x45	36x45	36x45
Tiffin RW 6	4650	6-31x5	36x45	36x45	36x45	36x45
Tiffin SW 6	4350	6-31x5	36x45	36x45	36x45	36x45
Titan 2	4200	4-41x5	36x45	36x45	36x45	36x45
Titan 6	5150	4-41x5	36x45	36x45	36x45	36x45
Traffic.....	2	1295	4-31x5	34x41	34x41	34x41
Transport Tractor N 5	2750	4-31x5	34x41	34x41	34x41	34x41
Triangle A 1	2185	4-31x5	34x41	34x41	34x41	34x41
United AX 1	.....	4-31x5	34x41	34x41	34x41	34x41
United BX 2	.....	4-41x5	36x45	36x45	36x45	36x45
United CX 3	.....	4-41x5	36x45	36x45	36x45	36x45
United VX 5	.....	4-41x5	36x45	36x45	36x45	36x45
United Tractor 6	2800	4-41x5	34x41	34x41	34x41	34x41
U. S. E 2	3250	4-41x5	34x41	34x41	34x41	34x41
U. S. H 3	3500	4-41x5	36x45	36x45	36x45	36x45
U. S. J 3	3950	4-41x5	36x45	36x45	36x45	36x45
U. S. K 5	4850	4-41x5	36x45	36x45	36x45	36x45
Universal G 1	.....	4-31x5	34x41	34x41	34x41	34x41
Universal D 2	.....	4-41x5	36x45	36x45	36x45	36x45
Universal A 3	.....	4-41x5	36x45	36x45	36x45	36x45
Vale 25A 2	2950	4-41x5	36x45	36x45	36x45	36x45
Vale 26A 3	3900	4-41x5	36x45	36x45	36x45	36x45
Vale 21 1	945	4-31x5	31x41	31x41	31x41	31x41
Vim 21 1	2185	4-31x5	34x41	34x41	34x41	34x41
Vim 22 2	2405	4-31x5	36x45	36x45	36x45	36x45
Vim 23 5	4345	4-41x5	36x45	36x45	36x45	36x45
Walker F 5	4-41x5	40x6	40x6	40x6	40x6	40x6
Watson Tractor 5	4050	4-41x5	36x45	36x45	36x45	36x45
White GBRE 4	2300	4-31x5	34x41	34x41	34x41	34x41
White TBC 1-2	3300	4-31x5	36x45	36x45	36x45	36x45
White TAD 3	4100	4-31x5	36x45	36x45	36x45	36x45
White TCD 5	5000	4-41x5	36x45	36x45	36x45	36x45
Wheeler S 1	1950	4-31x5	35x41	35x41	35x41	35x41
Wheeler X 1	2775	4-41x5	36x45	36x45	36x45	36x45
Wheeler Q 2	3250	4-41x5	36x45	36x45	36x45	36x45
Wheeler P 3	3950	4-41x5	36x45	36x45	36x45	36x45
Wheeler W 5	4570	4-41x5	36x45	36x45	36x45	36x45
Wilson E 2	1680	4-31x5	35x41	35x41	35x41	35x41
Wilson 2	3900	4-41x5	36x45	36x45	36x45	36x45
Wilson 3	3900	4-41x5	36x45	36x45	36x45	36x45
Wilson 4	3900	4-41x5	36x45	36x45	36x45	36x45
Wilson 5	3900	4-41x5	36x45	36x45	36x45	36x45
Wilson 6	4900	4-41x5	36x45	36x45	36x45	36x45
Wilson 7	5000	4-41x5	36x45	36x45	36x45	36x45
Wilson 8	5250	4-41x5	36x45	36x45	36x45	36x45
Wilson 9	5500	4-41x5	36x45	36x45	36x45	36x45
Wm WEL WD16 1	.....	4-31x5	36x45	36x45	36x45	36x45
Wm WEL WD16 2	.....	4-41x5	36x45	36x45	36x45	36x45
Wheeler S 5	2180	4-31x5	34x41	34x41	34x41	34x41
Wheeler P 1	.....	4-31x5	36x45	36x45	36x45	36x45

[illegible]

Name and Model	Tons Capacity	Quanta Price	Cylinder Bore	P. R.	TIRES
Packard	A 1	1196	4-3 1/2	32x3 1/2	32x3 1/2
Packard	B 1	1396	4-3 1/2	32x3 1/2	32x3 1/2
Prior	2	3150	4-3 1/2	24x4	30x6 1/2
Prior	3	2700	4-3 1/2	24x4	30x6 1/2
Prior	4	4250	4-3 1/2	26x5	40x6 1/2
Prior	5	6000	4-3 1/2	30x5	40x6 1/2
Tractors	TC1	4150	4-3 1/2	30x5	40x6 1/2
Tractors	TC3	4700	4-3 1/2	30x5	42x6 1/2
Flares-Arrow	3	3750	4-1 1/2	30x4	30x4 1/2
Flares-Arrow	5	5500	4-1 1/2	30x5	40x6 1/2
Rainier	1	1250	4-3 1/2	32x4	32x4
Rainier	2	1350	4-3 1/2	32x4	32x4
Rainier	3	1595	4-3 1/2	32x4	32x4
Rainier	4	2895	4-3 1/2	30x5	30x7
Rainier Tractor	5	2995			
Ree	P	1250	4-1 1/2	24x4 1/2	24x4 1/2
Republic	1	1295	4-3 1/2	32x3	32x3 1/2
Republic	Special	1	1095	4-3 1/2	32x3
Republic	10	1455	4-3 1/2	34x5	34x5
Republic	11	1775	4-3 1/2	34x5	34x5
Republic	12	2	4-3 1/2	34x5	34x5
Republic	T 3	3150	4-1 1/2	30x5	30x5 1/2
Reve.	1	995	4-3 1/2	31x4	31x4
Ritter	3	4-1 1/2	30x5	30x5 1/2	30x5 1/2
Ritter	4	4-1 1/2	30x5	30x5 1/2	30x5 1/2
Reve.	CDW	2	3000	4-3 1/2	30x3 1/2
Reve.	CDW	2 1/2	3250	4-3 1/2	34x4
Reve.	DEW	3	3800	4-3 1/2	30x5
Reve.	DEW	5	4200	4-1 1/2	30x5
Rush	D 1	895	4-3 1/2	31x4	31x4
Sandew	G 1	2050	4-3 1/2	34x3 1/2	34x5
Sandew	H 1	2550	4-3 1/2	34x4	34x5
Sandew	J 2	3250	4-1 1/2	30x4	26x7
Sandew	K 3	4250	4-1 1/2	30x5	30x5 1/2
Sandew	W 35	3975	4-1 1/2	30x5	30x5 1/2

[illegible]

## MERCHANDISING SPECIFICATIONS

THE tables which appear on these pages have been prepared with the thought of assisting the salesman in the merchandising of passenger cars and commercial vehicles. The data have been limited to those facts which the average salesman finds necessary for comparative purposes and as sales ammunition.

**The tables will be corrected and revised down to date every week.**

They will be supplemented by others from week to week, intended solely for the garageman and repairman who has the maintenance of passenger cars and commercial vehicles as his work.

ABBREVIATIONS — "A. Kms" Alviner Kent, "A-Lite" Auto-Lite, "Cms" Connercott, "G & D" Gray & Davis, "Emsman" Emsman, "L-N" Lees-Nevilla, "N. E." North East, "W. Lard" Ward Leonard, "SS" Straight, "QD" Quick Detachable, "C" Clincher, "QDR" Quick Detachable Removable. NOTE—Stock means that the rear tires are Stock and the front are smaller.

ABBREVIATIONS — "A. Kms" Alviner Kent, "A-Lite" Auto-Lite, "Cms" Connercott, "G & D" Gray & Davis, "Emsman" Emsman, "L-N" Lees-Nevilla, "N. E." North East, "W. Lard" Ward Leonard, "SS" Straight, "QD" Quick Detachable, "C" Clincher, "QDR" Quick Detachable Removable. NOTE—Stock means that the rear tires are Stock and the front are smaller.



# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 9

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, NOVEMBER 27, 1918

Fifteen cents a copy  
Two dollars a year

## Order Now For Big Winter Trade

Dealers are looking to their jobbers to take care of the big winter demand for Champion Priming Plugs.

They sure-fire cold motors because you have gas right at the sparking points of the spark plugs.

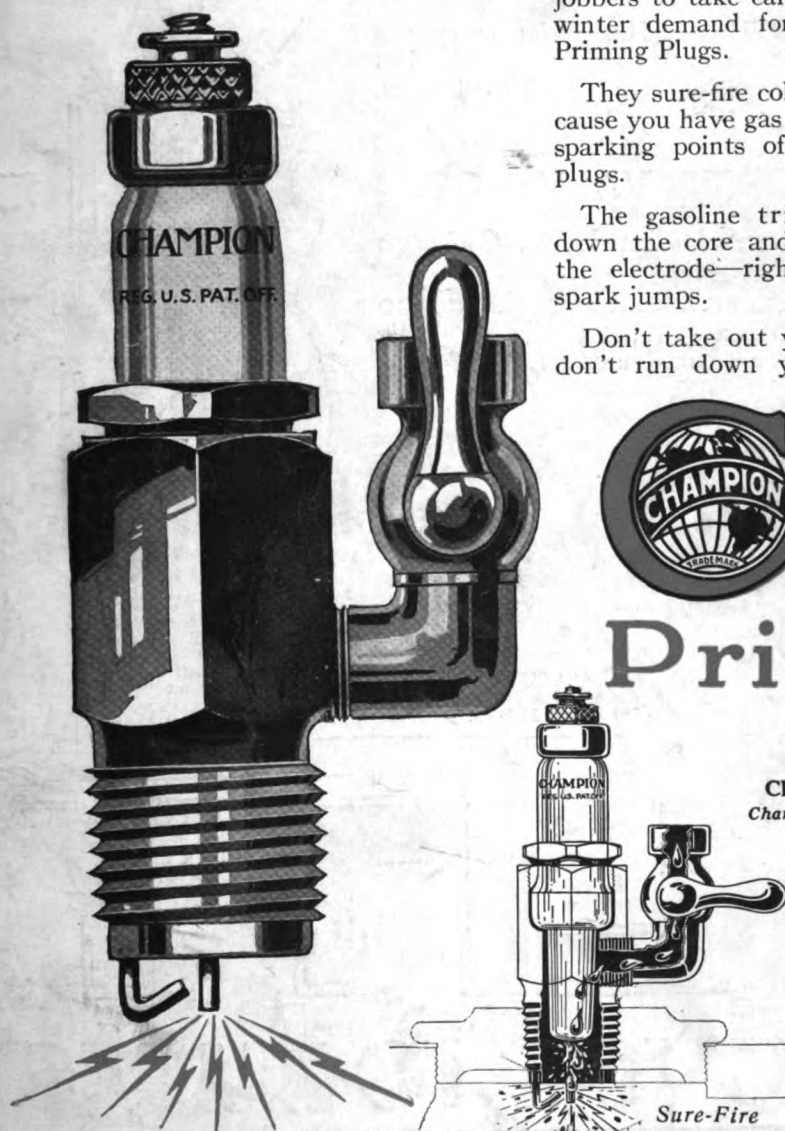
The gasoline trickles right down the core and drips from the electrode—right where the spark jumps.

Don't take out your plugs—don't run down your battery

or wear yourself out with useless cranking.

Champion Priming Plugs are imperative in cold weather for the hundreds of thousands of cars that do *not* have priming cups, and are infinitely better for those that do, because priming cups let the gas in *too far* from the spark plug.

Because of the public demand for the Sure-Fire of Champion Priming Plugs, *get your order in early* so you will not miss a single sale.



**Champion**  
Dependable  
Priming Plugs

\$1.50 Each

Champion Spark Plug Company, Toledo, Ohio  
Champion Spark Plug Co. of Canada, Limited, Windsor, Ontario



## The Ideal Xmas Gift



With the Government recommending none but useful presents, *you* recommend **UTILITY Heaters.**

Emphasize the fact that a **UTILITY Heater** is a permanent reminder of the giver, and unlike so many presents, a comfort especially appropriate because of its usefulness in the season when it is given.

Display the complete **UTILITY** line prominently in show window or show case. Let us send you free folders for circularizing your mailing list.

There is a **UTILITY Heater** for every car, ranging in price from \$9.00 to \$25.00. Handled by good dealers everywhere. Send for booklet. Dealers: Order of your jobber.



**UTILITY PUMPS**  
for All Cars  
\$12.00  
For Fords \$7.50

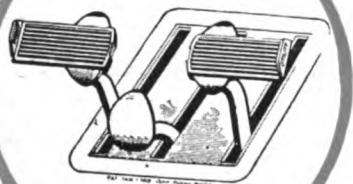


**UTILITY RIM**  
Wrench for All Cars  
\$1.75

**HILL PUMP VALVE CO.**  
*Mfrs. of UTILITY Products*  
**Archer Ave. and Canal St., Chicago**

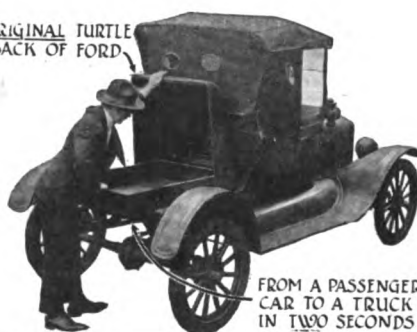
**Sales Department**  
**THE ZINKE CO., 1323 S. MICHIGAN AVE., CHICAGO**

**UTILITY DISAPPEARING TRUCK BODY**  
FOR FORDS. PRICE \$38.50



**UTILITY PEDALS**  
For Fords \$1.25

**ORIGINAL TURTLE**  
**BACK OF FORD**



**FROM A PASSENGER**  
**CAR TO A TRUCK**  
**IN TWO SECONDS**

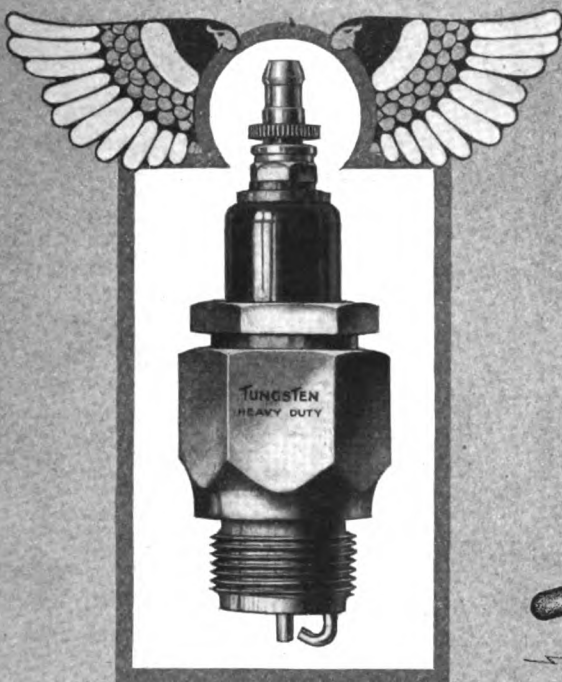


**UTILITY**  
**UNIVERSAL**  
Wrench for All Cars  
\$3.50 per set

# UTILITY

## Automotive Products





# Endurance

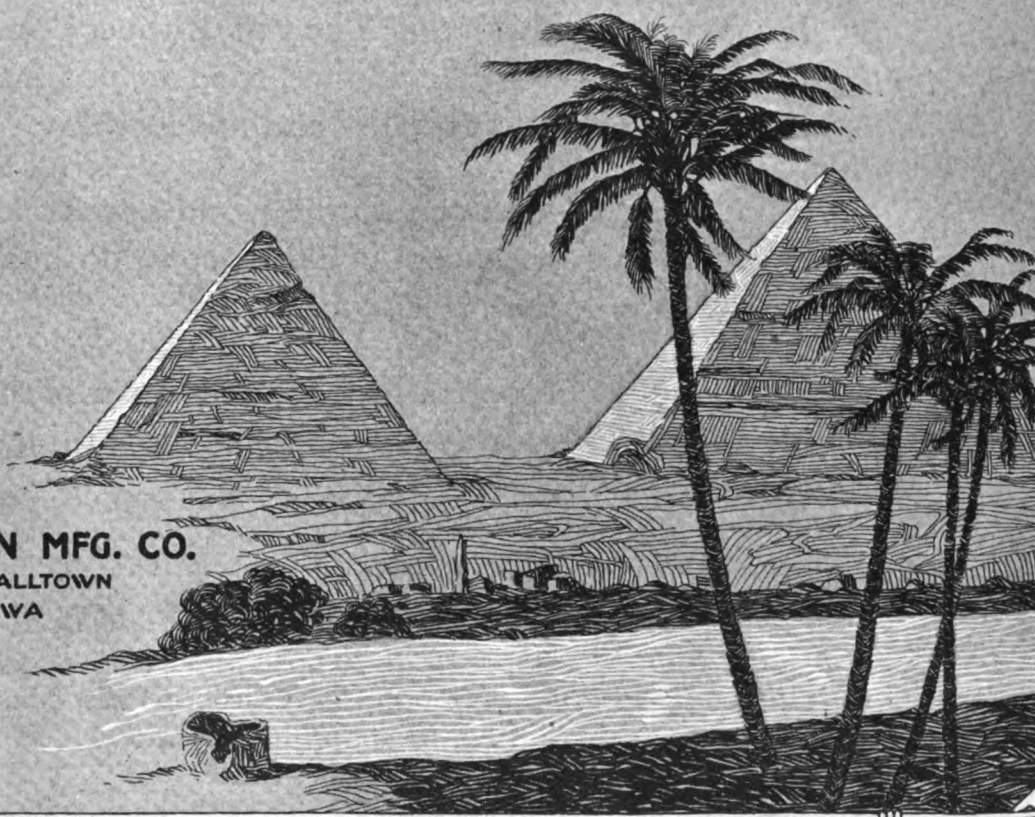
## TUNGSTEN

TRADE MARK REGISTERED

### SPARK PLUG

Always on the job

**TUNGSTEN MFG. CO.**  
MARSHALLTOWN  
IOWA



When writing advertisers please mention Motor World—it identifies you



# FISK TIRES

*"Where you find the Fisk trade mark  
there you find a good investment."*

THE Fisk Trade Mark Boy has come to mean *Fisk Quality* and *A Good Investment* in all parts of the world.

It conveys quickly all that The Fisk Rubber Company has, since the beginning, tried to put into its product—highest quality and honest value.

"To be the best concern in the world to work for and the squarest concern in existence to do business with"—*this is the Fisk ideal.*

If you would become a Fisk Dealer, a part of the big Fisk Family always working for bigger things, write for the Fisk Dealer Plan.

THE FISK RUBBER COMPANY  
OF N. Y.

General Offices

Chicopee Falls, Mass.

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

## The Class Journal Co.

U. P. O. Building, 281-241 West 89th Street, New York City  
 Horace M. Swetland, President  
 E. I. Ralph, Vice-President E. M. Corey, Treasurer  
 A. B. Swetland, General Manager

Business Department  
 Charles B. Shanks, Manager

Editorial Department  
 David Becroft, Directing Editor  
 Ray W. Sherman, Editor  
 Stanley P. McMinn, Managing Editor  
 J. Howard Pile

### Branch Offices

Chicago—Mallers Bldg., 59 East Madison St., Phone Randolph 6960  
 Detroit—95 Fort Street, West, Phone Main 1851  
 Cleveland—Guardian Bldg., Phone Main 1142

Subscription, Per Annum (Postage Paid).....\$2.00  
 Foreign and Canadian Subscriptions.....4.00  
 Single Copies (Postage Paid).....10 Cents

### Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to MOTOR WORLD.

Cable Address, "MOTORWORLD," New York

Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 248 West 89th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. O. Pearson, Secretary.

Member of the Audit Bureau of Circulations

Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

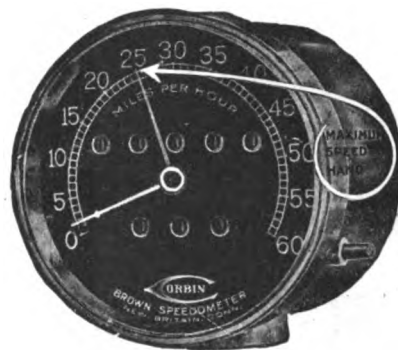
The Shows Are Coming Back.....	7
Ten Commandments for Reconstruction...	8
Boost Rural Motor Express.....	11
Photos of the Liberty Engine.....	12
An Editorial by Chamberlain.....	13
Leaders Who Lead.....	17
Winter Business Department.....	18-19
The Law .....	20
Better Mechanics.....	21
Repairshop Short-Cuts.....	24-25
Editorial Observation .....	26
Letters from Readers.....	27
Patriot Trucks in Two Models.....	29
Cutting Down Tractor's Idle Time.....	30
The Retail News.....	31
Automotive Equipment.....	32
Specifications .....	45-48
Regular News Department.....	33-44

Advertisers' Index on Pages 110-111

## Reasons for

**CORBIN-BROWN SPEEDOMETER**

## Supremacy



## 5.—Adaptability

Nothing has contributed more to the dominant position of the Corbin-Brown speedometer than its close adaptability to the various types of motor vehicles for which it is made. Each Corbin-Brown model has been developed with keen regard for the special work it has to do.

The models for general automobile service meet every requirement of accuracy, durability, compactness and appearance. They have proven themselves ideally suited to pleasure car use under all road conditions. Easily installed. Easily read. Assured of long life.

The truck model is a burly speedometer, with a 4-inch dial, large numerals and extra strength in every part. A glance suffices to show that it is properly built to meet the severe tests of motor truck service.

The Ford Specials, furnished either with complete cowl-board or with neat rigid bracket for attaching to the dash, are speedometers of full Corbin-Brown strength and accuracy—built to meet the particular requirements of the Ford car.

For motorcyclists there is the Corbin-Brown rear-drive motorcycle speedometer. Designed and manufactured expressly for this branch of service, it maintains its accuracy under the hardest usage.

*Write for catalog which explains why the Corbin-Brown is the ideal speedometer for YOUR type of motor vehicle. Ask your dealer about the Maximum Speed Hand. It's a speedometer feature that you have been waiting for.*

## Corbin Screw Corporation

American Hardware Corporation, Successor

NEW BRITAIN, CONN.

BRANCHES: New York Chicago Philadelphia





**The Most Remarkable  
Material Yet Produced**

*for*

Automobile Tops, Side Curtains  
and Upholstery.

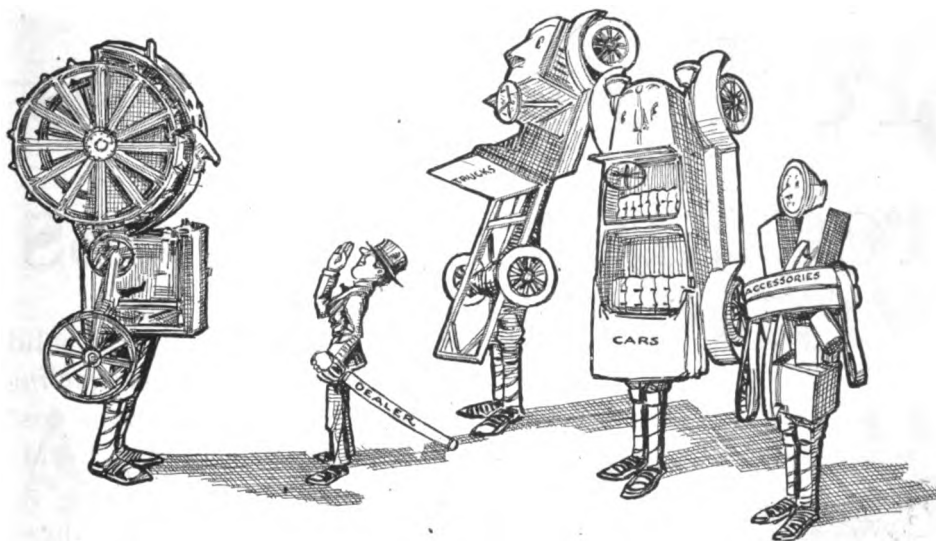
Light, pliable and absolutely  
waterproof.

DRIDEK makes the finest tops  
for the finest Cars.

*Send for samples and  
price list today  
to Dept. D*

**L. J. MUTTY COMPANY**  
BOSTON, MASS., U. S. A.





## Coming into Line

A tractor manufacturer in Ohio said to a MOTOR WORLD man the other day:

"We are coming around to the viewpoint of having our product sold and maintained by the motor car trade.

"A few days ago we were obliged to send a service man to ———, which is 300 miles from here, to fix up a farmer who had one of our tractors. When our man got there he found that the entire trouble was faulty carburetor adjustment. The thing was fixed up in ten minutes.

"If the implement man who was our dealer had had the necessary experience along maintenance lines we would have been spared the expense of sending that man, and the farmer would have had no interruption in the service of his tractor.

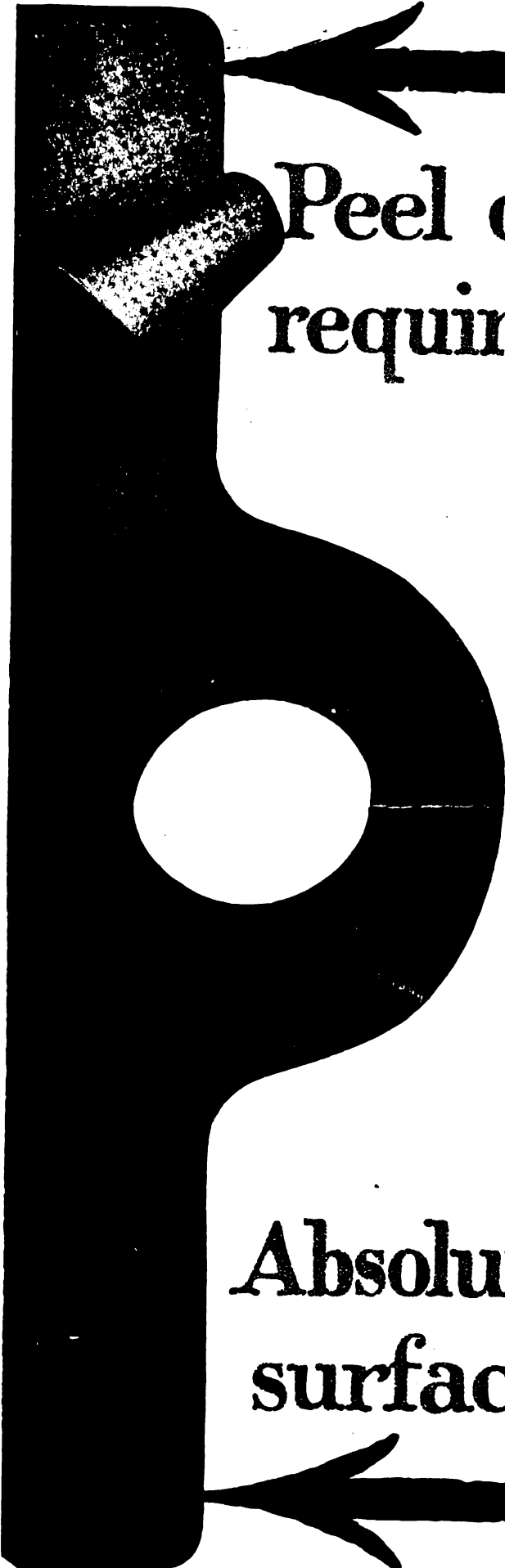
"That is one of several important reasons why we are looking with constantly increasing favor upon the motor car dealer. He can give service—and service is a prime essential."

### This means a lot to dealers.

The motor car trade is going to sell tractors—is selling tractors. Next year more will sell them. In the not far distant future there will be few tractor makers who are not placing their agencies with you men who have gained a sales and service experience in the motor car field.

The tractor has to have service—and the man best qualified to render service is the motor car dealer—and that's YOU.

Therefore, no matter what you have thought heretofore, you should be thinking tractors today. You should be investigating the field, studying designs and devices, looking over your selling field—getting ready for the day when you will be DEMANDED as a tractor dealer.



# Peel off layers to required thickness

Why waste valuable time *filing* solid shims? Why waste labor *assembling* loose-leaf shims? Both operations cost money and diminish profits. LAMINATED shims are made as easily as lifting paper from a pad. In these thrifty times—everyone turns toward—

## LAMINUM

LAMINATED Shims have been adopted by leading Governments, manufacturers, engineers, dealers, jobbers, repairmen throughout the world, because LAMINUM gives *better* results and saves time, labor and money.

Stock Shims for:—Ford, Chevrolet Four-ninety, Continental 7-W, Continental 7-N, Maxwell, Overland, Dodge.

### LAMINATED SHIM COMPANY

533 Canal Street

New York City

DETROIT: Dime Bank Bldg., ST. LOUIS: Mazura Mfg. Co.

ENGLAND: R. A. Rothernel, 6 Great Marlboro St., London, W.

# Absolutely accurate surface like glass

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, November 27, 1918

No. 9

## Dealer Shows Are Coming Back

*Show Managers at Meeting in Cleveland Re-schedule Exhibitions That Had Been Called Off Because of the War—Plan Bigger and Better Ones*

*By Ray W. Sherman*

### Where Dealer Shows Will Be Held

Boston .....	March	Kansas City .....	Not Decided
Bridgeport .....	Not Decided	Milwaukee .....	Jan. or Feb.
Buffalo .....	1st week March	Minneapolis .....	Not Decided
Brooklyn, N. Y. { Trucks .....	April 1-5	Newark, N. J. ....	Feb. 15-22
{ Cars .....	Mar. 22-29	New York .....	Probably March
Chicago .....	Probably March	Philadelphia .....	March
Cleveland .....	Late March—Early April	Pittsburgh .....	March
Des Moines .....	Feb. 17-22	St. Louis .....	2d or 3d week March
Detroit .....	January	San Francisco .....	March 1-10
Fort Dodge .....	Depends on Building	Syracuse .....	March
Harrisburg .....	Not Decided	South Bathlehen { Trucks .....	Feb. 24-27
Hartford .....	Not Decided	{ Cars .....	Feb. 17-22
Indianapolis .....	Not Decided	Trenton, N. J. ....	3d week March
Louisville .....	Feb. 15-22	Utica .....	March

CLEVELAND, Nov. 25 — The dealer shows are back. The big group of merchandising exhibitions will be held again, but somewhat later than usual.

The shows were called off when the ban was imposed, but now the lid is off.

The dealers feel the need of a business tonic, as was stated numerous times today in the

meeting of the National Association of Automobile Show Managers, which is in session here at the Hollenden.

The schedules of previous years will not be quite as in former years. Things used to start off with the New York show in January, and the big Western circuit followed the Chicago show a couple of weeks later.

But this year the New York and Chicago shows will not be held as usually by the N. A. C. C., so there is not the necessity for circuits that used to exist.

Also because there is not the usual amount of "new stuff" and exhibition chassis to ship from show to show it is not necessary that circuits be so religiously maintained.

Furthermore, the late lifting of the lid on shows gives less time to get ready, and the result is that there will be more spring shows.

They come down nearer to the warm spring weather, all of which is fine for retail selling. The nearer to warm weather a show is held the greater is its selling value.

One of the big developments at the meeting was the possibility that the New York and Chicago dealers may hold shows in those cities. When the N. A. C. C. a few days ago decided not to hold shows this year the dealers promptly recognized the opportunity for a spring show to give spring business a stimulus, and so representatives of the New York and Chicago dealer associations are attending the meeting to gather all the ideas possible in case they go ahead with the exhibitions they would like to hold if buildings can be secured and other details arranged. It will be the first time the dealers in these cities have held the shows that

dealers hold in other cities, and the New York and Chicago representatives were congratulated by the other association delegates and managers on the possibilities.

The Cleveland dealers and Manager Fred H. Caley are playing host to the visitors. There was a luncheon today and a dinner this evening. Caley has always contended with the other show managers that the Sixth City is the greatest convention city in the world, and by the close of today everyone is about ready to agree with him.

The show managers will continue their session tomorrow. There are numerous details to be arranged. E. W. Campbell, of Boston, who decorated the Boston, Cleveland, Minneapolis and Kansas City shows last year, is attending the convention to confer with any of the managers who wish to take part in the association's decorating plan.

One of the gratifying things is that the Minneapolis Automotive Exposition will be held again this winter. Last year, held in the Overland building, it was bigger than the New York and Chicago shows rolled into one. The building was taken for war work this year and Minneapolis did not know what to do for a show building. But now it seems likely the same building can again be used.

# 10 Fundamentals For Reconstruction

## *What Jordan Told The Show Managers*

TEN fundamental propositions necessary as a foundation for peace time prosperity were offered by Edward S. Jordan, President of the Jordan Motor Car Co., in a striking talk before the National Association Automobile Show Managers.

Pointing out the fact that the world's greatest need to-day is calm and intelligent leadership in the application of the lessons of the war to the problems of peace. Jordan suggested ten planks for a platform of reconstruction.

"The future of every industry, including our own is at stake," said Jordan, "and if unselfish co-operation can win the World War it can safeguard a nation in peace.

Because we represent the third largest and certainly the most progressive industry in America, the eyes of the business world are upon us.

"You have come here to determine what you can do to help this great industry adjust itself to the demands of a peace market.

### Let Us Co-operate

"The suggestion I am about to make, you have already adopted, else you would not be here. It is this—*Let us co-operate unselfishly with heart and hand.*

"No group of individuals, whether they be manufacturers or dealers, can be sufficient unto themselves. The problem of the one cannot be solved without

the co-operation of the other group.

"The organization of the National Automobile Dealers' Association is simply in keeping with the spirit of the times. My only regret is that it was not accomplished many years ago. Under wise leadership, it must become a powerful factor in an industry in which so much depends upon intelligent co-operation, between the man who makes the car and the man who sells it.

"The first thing this industry must do, upon its resumption of production, is to step off on the right foot. If we are going to resume production, we must resume advertising and by all means we must display our merchandise.

"If you ask me whether I think we





EDWARD S. JORDAN

ought to hold shows, I will ask you whether you think we ought to try to sell our goods.

"If there had never been a show held before in the history of the business, I would strongly advocate that we hold not only one, but many shows in every section of the country. What better method can we choose to let the public know that we are back on the job.

"*There should be no question as to the advisability of holding shows.* However, I believe careful consideration should be given the time of holding them, and by all means the management of each show should be strongly centralized in one man, and the method chosen for the allotment of space, should be absolutely above criticism.

"When Mr. Caley asked me to talk to you to-day, he intimated that I had a local reputation, as a prophet. Presumably he wants to help me make it national. My subject is,

#### "Where Do We Go From Here?"

"It recalls to me a famous murder trial when a great criminal lawyer spent a week preparing a hypothetical question, as to the sanity of the defendant, to be answered by an alienist. It took seven days to prepare the question and seven hours to propound it. The witness answered, 'I don't know.'

"Nevertheless, we have the lessons of the war to guide us in peace.

"The problem of the Nation in war, was the problem of each industry and each individual identified therewith.

"If everyone of those twenty-one million people who bought Liberty Bonds realized to-day that the problem of the nation is still the problem of each individual, we will have no difficulty in

readjusting ourselves to peace pursuits, promptly.

"The greatest thing that we have learned is the power of unselfish effort expressed in co-operative action.

"Only the autocrat at one extreme, and the bolshevik at the other feels that he is sufficient unto himself and can prosper without helping others.

"The following suggestions are merely the result of much reading of the opinions of men of intelligence.

"They apply to our own industry because it is an American industry dependent upon Americans for its success, and if America goes ahead now in the struggle for the world markets you and I and our children will be benefited.

If America hesitates to continue to co-operate in that wonderful spirit exhibited during the war, through lack of foresight and intelligent plan, it will be your fault and my fault, as well as that of the people at Washington.

"A ministry of Reconstruction should be organized immediately under strong and experienced leadership to encourage the unselfish co-operation of all national, state and local interests, industrial, social, political and religious in the execution of the following program:

"First—The regulation of demobilization to prevent unemployment and allo-

## Jordan's Reconstruction Platform

- 1—The regulation of demobilization.
- 2—Immediate program of national highway construction.
- 3—Extension of farm credit system and encouragement of tractor production.
- 4—Coöperation of intelligent business men.
- 5—National movement to encourage public works.
- 6—Secure advice and coöperation of bankers.
- 7—Form a ministry of education for American boys and girls.
- 8—Encourage profit-sharing and greater efficiency.
- 9—Broaden the scope of service at home.
- 10—Encourage the creation of new wealth by hard work.

cate materials, capital and labor. Give all war workers as well as soldiers, thirty days pay and transportation to their homes, which in many cases are far from their present employment. Idle men in crowds in big cities present the greatest danger.

"For instance, every man who has been in any way identified with the motor car industry should be listed by the government and his employer, or some other manufacturer, should be encouraged to allow him to resume his former position. Every garage owner in the country should be given an opportunity to replenish his force of mechanics by drawing upon the men being mustered out.

Second—Start immediately a program of national highway construction with standard specifications, using the present military camp equipment, trucks and supplies. Pay a standard wage for various classes of work with a bonus to all workers for speed and efficiency.

"Surely you will recognize this suggestion as one which if carried out would bring national aid to a work for which nearly everything has been done in recent years through the influence of our industry.

Third—Extend the farm credit system within reasonable limits and encourage the production of farm tractors, not with the idea of making them cheap but more efficient. Thirty-seven per cent of the farmers of America are tenants. Without national aid in acquiring property, we will soon be dependent upon a peasantry.

"Consider the significance of this suggestion from the standpoint of this industry, and the tractor industry. Instead of selling one car to the landlord, you will have an opportunity to

**Send Us  
Your Show Dates  
for  
Motor World Calendar**

sell many more, to many independent farmers who will no longer be tenants.

**"Fourth—**Secure the co-operation of all intelligent business men in the observance of the following facts.

"Prices should decline simultaneously with wages, materials and overhead. Price cutting for selfish or sentimental reasons while wages, materials and overheads are still high, will react to the detriment of the man who starts it and the industry of which he is a part.

"If a price has been inflated and is suddenly reduced to gain a competitive advantage, sales are more likely to be retarded than helped because the public will be included to expect further reductions before spring. There is no bottom to promiscuous price cutting. Furthermore, we are all in the same craft, going through the rapids and woe unto the man who rocks the boat. Only a mere weak competitor may go overboard, but the public will conclude that the whole ship is sailing on a dangerous course.

"The buyer of steel, copper, cotton, wheat, or any general commodity should be made to feel confident that he is buying at the best price that will be possible for a definite period of time and that preferential prices to favored individuals are not countenanced. Otherwise, there will be great hesitation and curtailed production with consequent unemployment.

**"Fifth—**Organize a national movement to encourage public works by state, municipal and county authorization to provide an important outlet for allocated labor and materials.

**"Sixth—**Solicit the advice and co-operation of competent bankers in the development of plans for international trade. The first necessity is to produce goods which our foreign customers want, but a most important question relates to foreign payments.

"It is not a question of solvency or time payments, but one of exchange. Foreign nations will before long owe us about ten billion dollars. The interest charge will be four hundred million annually. The foreigners will not give up their scant supply of gold. With large trade balances in our favor and restricted shipments of gold for settling balances our trade will be restricted by exchange premiums charged on drafts. We have paid two per cent on Canadian drafts and five per cent on Buenos Aires, Madrid, Spain has paid fifty per cent on New York and Italy has paid one hundred per cent.

"In our own industry, we must not forget the markets of the world have been ours exclusively since 1914. Previous to that time, South America and other countries favored European cars. Now there is one factory in Italy in which it will be possible to produce cars on a scale approaching American standards. The foreigners during the war have had to take what we gave them. Henceforth we may expect to have to give them what they want. I know of an instance in which an American manufacturer enjoyed a business of several

## Pennsylvania Department of Agriculture *Tractor Operator's Report*

Date.....

Name of Tractor..... No.....

Where working—Name of Farmer.....

Township..... County.....

Condition of land.....

Time started work..... Time quit.....

No. of plows..... Time plow adjustment.....

Gasoline..... Kerosene..... Oil.....

Time engine trouble.....

Repairs and time consumed.....

Extra parts required.....

No. acres plowed..... Disked..... Harrowed.....

No acres work contracted.....

Signed.....

### KEEPING TRACK OF PENNSYLVANIA'S STATE TRACTORS

The State of Pennsylvania owns a number of tractors of different makes and these have been hired out to farmers in different counties of the state for plowing, diskings and harrowing. In order that the Department of Agriculture at Harrisburg may keep in constant touch with the operators, reports are drawn up to include all the details that the department wants to know about the tractors' performance. These reports are filled out by the operators daily and mailed to Harrisburg together with the expense accounts. The information is then laid out in tabular form and a glance shows how the tractors compare in results attained and whether the operators are on the job or loafing.

hundred thousand dollars, principally because he had a magneto on his car.

"We are no longer in a seller's market. The buyer will have his inning now. True, there will be a great demand, and production will not equal it for a year to come. But the manufacturer and dealer who survives will find the secret of permanent success in the quality and service which he puts into his merchandise. If he skimps his product now, to realize a price advantage, he may make a fortune at the expense of his dealers and owners, but to his children the name of his car as a factor in the industry, will be only a memory.

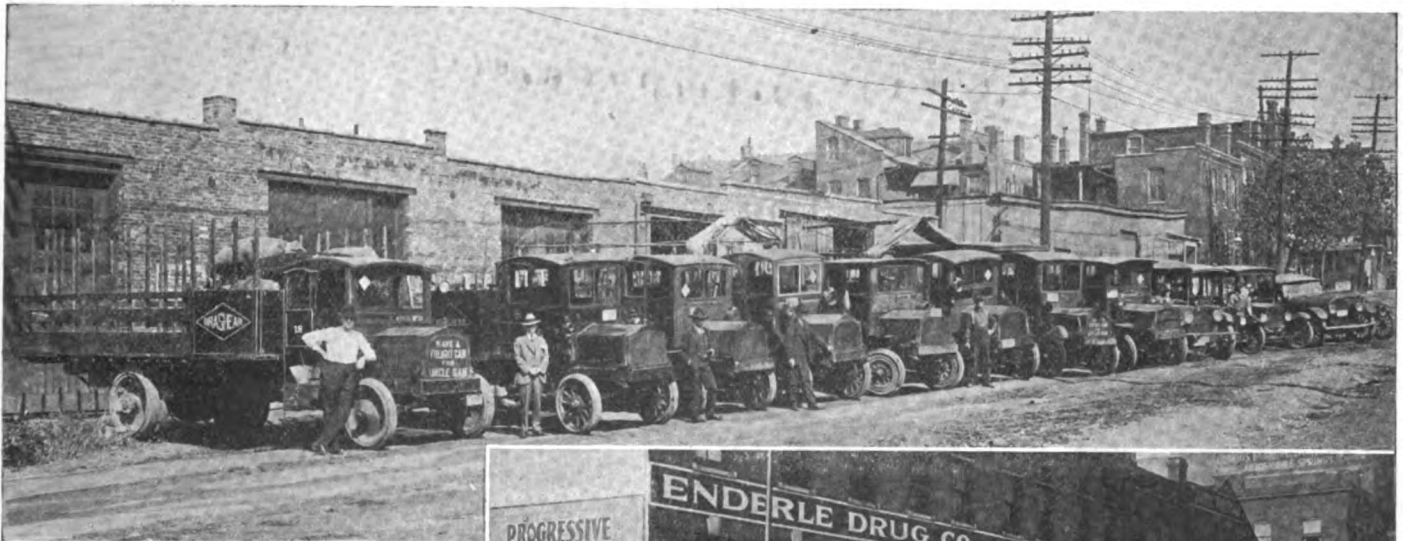
**"Seventh—**A ministry of education to extend to millions of children in the more isolated sections of the United States, the same educational advantages enjoyed by the children in the large centers of population. Few persons realize that vast numbers of American boys and girls are being turned loose upon the labor market after the briefest kind of schooling under the direction of teachers with nothing more than an eighth grade education.

**"Eighth—**The war has proven that we can, through intense co-operation produce more goods with less men on the farms and in the factories than we pro-

duced before the war and greater production can be attained by encouraging men by profit sharing to produce more and earn more. Greater production through greater economy and greater efficiency will be the solution of the problem.

**"Ninth—**The task of the social and religious organizations of America, is to so broaden the scope of service at home as to provide means of expression for those millions of young men who have learned the great joy of giving even their lives to help others. The Chicago society woman who confessed that, before she entered war work, she thought all persons outside her own set ate pies with a knife, will be ready to help. The millionaire who found a lifelong friend in the hod carrier who proved himself a hero in the trenches, will return a different man.

**"Tenth—**Henceforth every young man must have a 'chance for his white alley.' No czar, kaiser or bolshevik will be tolerated in any industry. The true aristocracy is one of character, brains and capacity. The boy who inherits money or takes it by cleverness from others, will have much to explain. He who creates new wealth by hard work will lead his fellow men."



## Boost Rural Motor Express in Your Town

**R**URAL Motor Express is going to develop a truck market for those dealers who get behind the movement.

As people see the idea growing they will favor its expansion, and as it is seen how successful the venture is as a business proposition other interested men will get into it. This will mean the sale of more trucks.

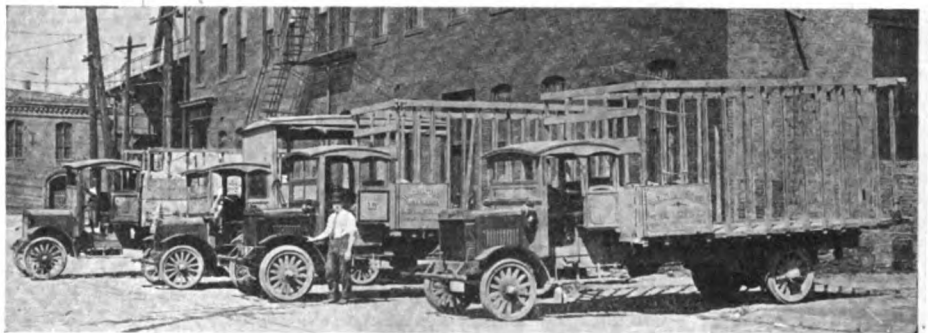
Did you see the other day in the papers the increase in express rates? Did you gather that this means more use of trucks in express service?

The National Motor Truck Committee at 7 East Forty-second Street, New York City, is doing a great work to boost the movement. It furnished these pictures to Motor World.

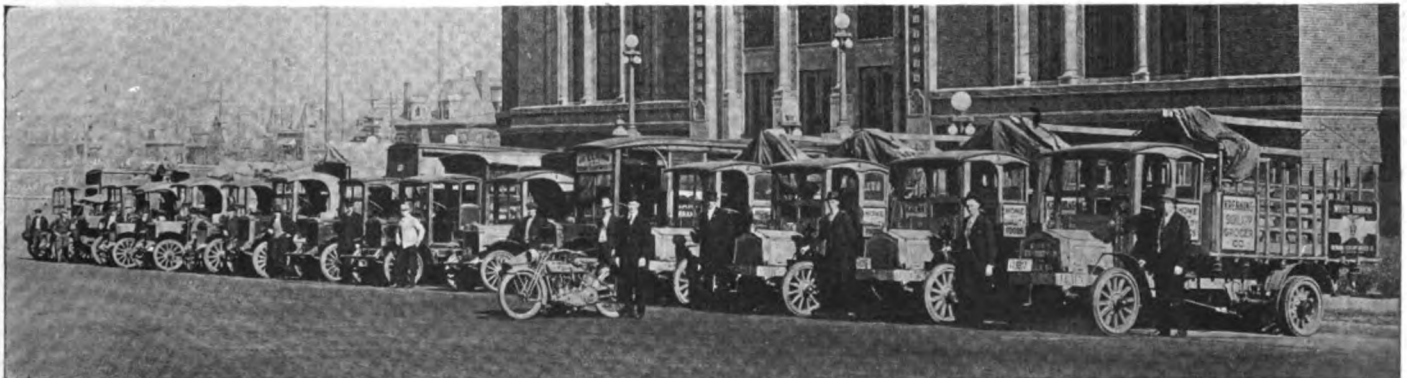
Secretary F. W. Fenn of this committee is helping hundreds of dealers get the movement started. Ask him to help YOU.



*Top—Brashear Motor Truck Co.'s fleet in St. Louis. See the radiator motto: "Save a freight car for Uncle Sam." Lower—The Progressive Transfer Co., St. Louis, is operating this fleet out of that city*

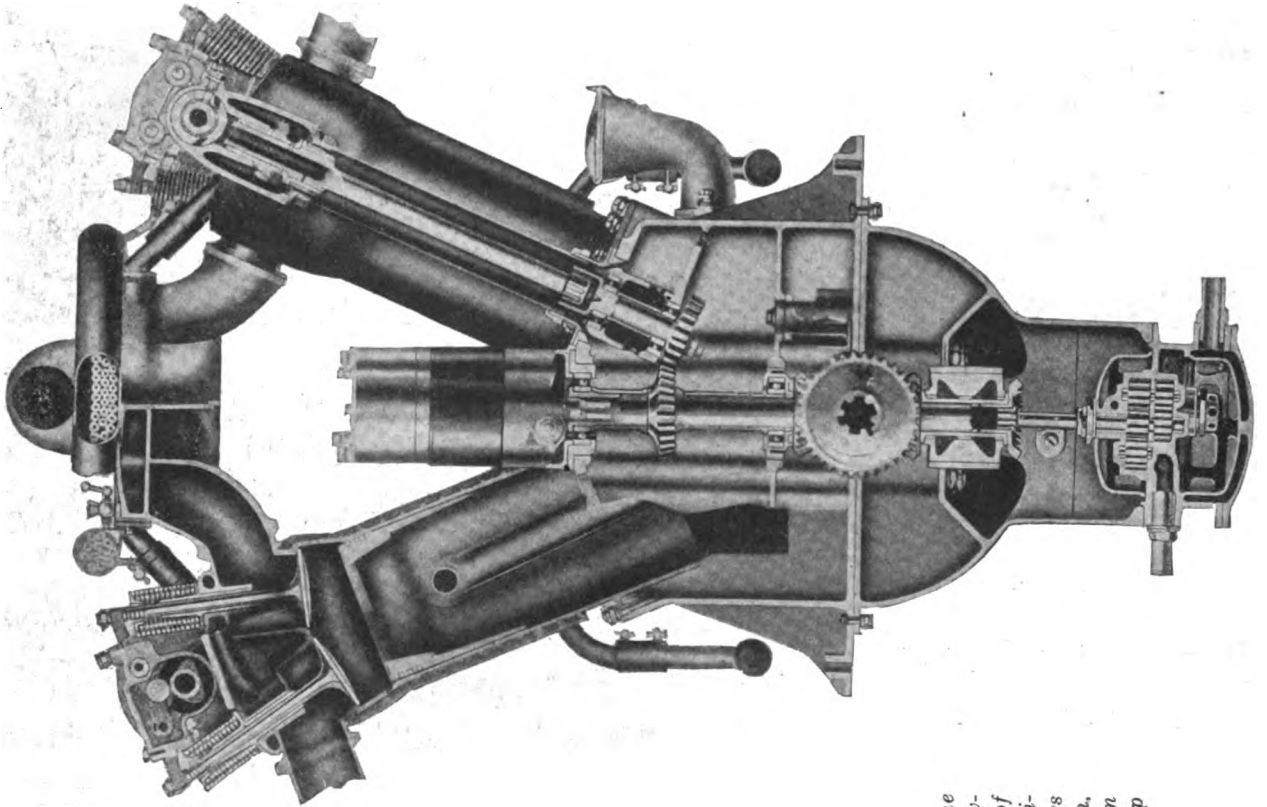
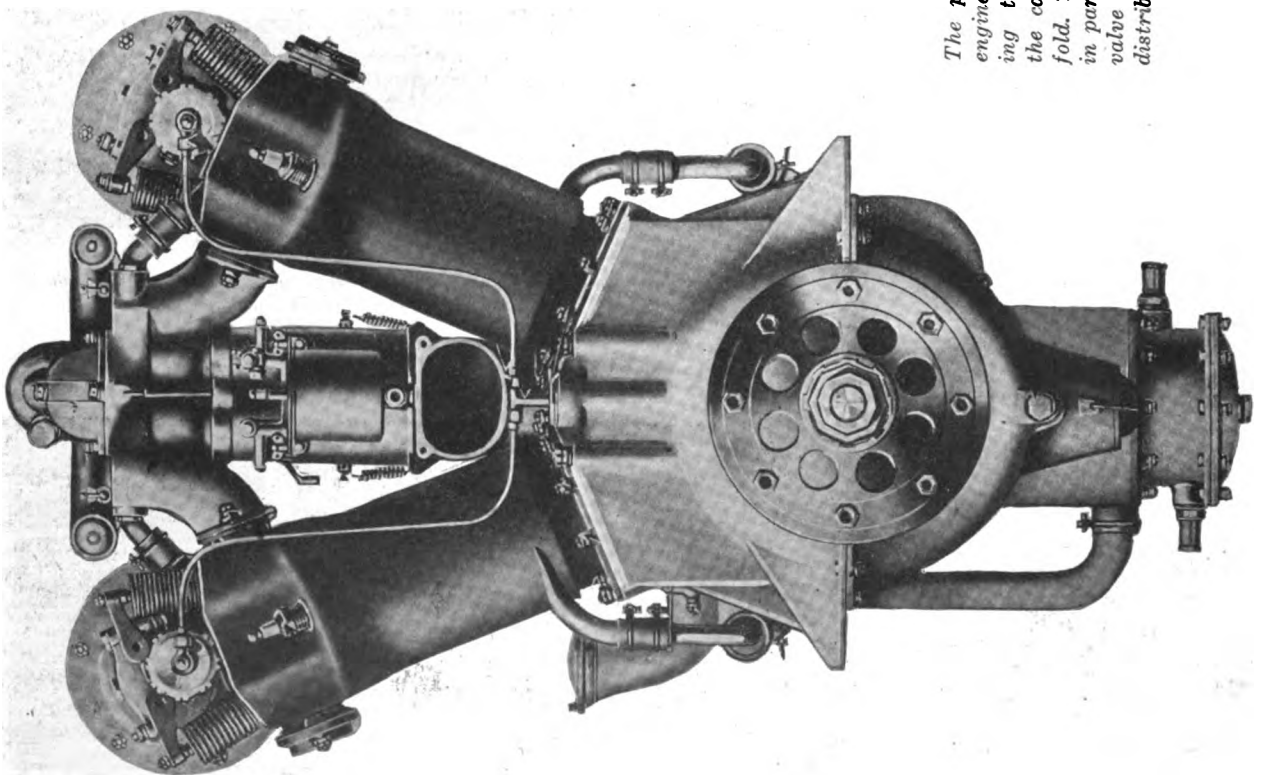


*The St. Charles and St. Louis Motor Truck Co. is handling all kinds of rural express on a profitable basis*



*The Motor Transportation Co., St. Louis, operates this fleet of fourteen, all of which means fourteen truck sales for dealers*

## First Photographs of the Liberty Aircraft Engine



*The propeller end of the engine, at the left, showing the arrangement of the carburetor and manifold. The other view shows in part section the piston, valve mechanism, ignition distributor and oil pump.*

# An Editorial

*By Percy E. Chamberlain*

*To P. E. Chamberlain, manager of the Cadillac Motor Co. of Denver, and a keen thinker, MOTOR WORLD in a letter said: "As you look into the future what can you see for your own company and what can you see for other dealers of all grades and degrees? Just what do you think will be the condition in the trade one year from now, ten years from now—and twenty years from now?" His answer follows:*

**S**INCE receiving yours of the 2nd inst. I have done little else but indulge myself in a train of thoughts about the automobile future. It is a most interesting subject and I have written some of my thoughts as per the enclosures. If any or all of them should be consigned to the waste basket instead of to you please do not hesitate to place them there with the thought that my effort has not been wasted since it has stimulated me personally to a continuance of my small part of the fight I describe.

For it is a fight—an endless, thankless, personal fight to make our patrons realize that some of us, at least, have the right to hold up our head and say: "We are merchants. We are part of the business life of our city—a great big part—paying our share of its expenses, contributing to its life, well being and prosperity. We give that which any honest MERCHANT should give—no more, no less. We ask of you the same courtesy that any right-doing merchant is entitled to receive. Nay, we demand it. Ages of business practice have firmly established our relative status."

It is an endless fight to make our own tradesmen realize that they are merchants and that as such they owe a debt of long standing to their fellow tradesmen and to the part of the public each of them serves.

Unless we DESERVE we may not DEMAND. Unless we both deserve *and* demand we will not get that which is our due. Because witches were burned at the stake over a hundred years ago is no sign that anyone believes in witches to-day. Because in its irresponsible infancy the automobile industry attracted to itself some improper playmates is no reason why the industry of to-day—established and successful—should, in its entirety, submit without trial to judgment born of ancient suspicion of our methods.

Certainly the future holds wonderful prospects for us. There may be improvements, no doubt will be. But with those things the manufacturer has most to do. Our business is to sell the product and service on the product. It is our business to eliminate the evils of the trade. We must come CLEAN. We must teach owners to DIFFERENTIATE. We must constantly EDUCATE ourselves and our public.

One of our greatest tasks of the future is properly to define, classify and organize our SERVICE. We must not lose the ground we have gained during

the war through being forced to adopt policies which, otherwise, never would have been adopted. We must come to a sense of the close relationship of SALES and REPAIRS. Our salesmen must respect our repairmen and vice versa. Our repairmen must respect our owners and vice versa. Our industry must be known not only as the BIGGEST but the CLEANEST—clean in method as well as literally.

There will ever be with us the USED CAR TRADE. It must be made definite and leave bargaining methods behind. The customer must be shown the difference between DEPRECIATION and MAINTENANCE—for both of which he must always pay.

We must not attain the name of being the greatest industry in the world because we cannot help ourselves, but because—through merit—we have placed ourselves there. We must reconstruct automobile terms. "Game" must give way to "business." "Free" must be absolutely dropped as a qualifying word.

Our greatest harm now comes from the small dealer. He must be taught the psychology of business—cleanliness, promptness, method. He must learn that expense along certain lines is NOT expense. He must thoroughly believe that the apparent loss of to-day, because he refused to cut a price or allow an improper discount, really means two sales and two commissions to-morrow.

Along such lines must we steer our future course. How it is to be best done I am not sure. Personally I think the owner is a short-cut to much of it. Teach him to know the difference between the good and the bad and he will, naturally, patronize the good just as he goes to the house of repute on Fifth Avenue for his personal needs and not to the East Side.

Unquestionably the biggest thing on the dealer's horizon is the N. A. D. A. Give it the strength to reach each community—make of it a personal association in close touch and harmony with the individual dealer so that he gives it his confidence and looks upon its headquarters as his own—let it father propaganda along educational lines in addition to its direct work of a national character.

I submit, also, that Motor World is another of the greatest factors in the future development of the dealer. I would like to see every dealer in the country urged—I almost said forced—to subscribe for Motor World. Nothing but great good could come of this. In no other way that I can think of would the scat-



tered dealer get the ideas he must have and form a source in which he would have more confidence.

In some way—through Motor World or the co-operation of the N. A. D. A. and the N. A. C. C.—there should be established an educational bureau along broad lines for the purpose of SELLING those distributors who have to be sold on the matter of recognizing "fundamentals" of good business and adopting same individually. The representatives of this bureau should go to school under competent instructors and LEARN the psychology of automobile service as well as a definite, comprehensive system of keeping automobile costs and handling all parts of a general automobile business. Forms, variable as individual occasion might demand, should be prepared. These high-class men should actually establish such methods with individual concerns, working with five or ten firms simultaneously for a sufficient time to accomplish the desired results.

The price-cutter and his non-ethical friends should be ruthlessly stamped out as the Yank crushed the method of the Hun from the earth. Let this great industry waste no time arguing the merits of FUNDAMENTALS—the things which ages of merchandising have established as GOOD. Rather let us turn our attention to the business of putting these funda-

mentals into PRACTICE. Until we do we shall not be RIGHT with our owners. Until we ARE right our future prosperity will be mixed with the same old controversies, arguments and loss of deserved earnings.

'Tis a great future we have to face. The war has JUSTIFIED the automobile as nothing else could have done. No one can question this future. Prosperity, such as no industry has ever known, will be ours. Let us contemplate this prosperity with meek hearts. Let us not, as in the early days, lose our sense of good business practice. Instead of a comparative few, let us make the ENTIRE industry as it should be.

As ever, since the beginning of trade, the evils will be eliminated only after a long, thankless fight generalised by a few broad-minded men to whom the result is full justification for the fatigue of battle.

England—slangless England—has given us the expressive words, "Carry On." That must be our motto, to the end that five years from now—ten years from now—twenty years from now—all classes of dealers will hold the respect of their communities, both for themselves as business men of integrity and for the great automotive industry of which they are a part. Sincerely yours, P. E. CHAMBERLAIN.

*[On the pages that follow appears the "enclosure" mentioned in Chamberlain's first paragraph—an allegory depicting the future of the business in which you are engaged.—EDITOR.]*

## ... and this is what he saw

*By Percy E. Chamberlain*

AFTER a glorious day which started with the newsboys' cry of "Extra! Peace is signed!" and during which a joy-delirious citizenry staged a celebration the like of which will never be known again, I stopped in at a deserted store to pick up my accumulated mail. Among the letters I found one from Motor World in which my good friend Ray Sherman said:

"As you look into the future what can you see for your own company, and what can you see for other dealers of all grades and degrees? Just what do you think will be the condition in the trade one year from now, ten years from now and twenty years from now?"

Oh, dear! It was a glorious celebration. It was no time to think of trade problems. The brain refused to function along those lines. . . . Let's see . . . from midnight to midnight . . . hum-hum. Suppressing a yawn, trying to think, I closed my eyes—

HOW she came into the room I know not, but my first knowledge of her was to hear her say: "I am Future. Come with me. It is bidden that I show you that which you would see. Come!"

It did not seem unreal that I should be borne in arms that gave me a sense of security. "Ah, Future," I said, "with you I feel safe. Let us go."

Swiftly she bore me into a clean, star-lit November night. Up and over the tops of houses I traveled without sense of motion, without fear. Upon the golden dome of the Capitol Building, shimmering in the half light of a wonderful night, we paused.

Future spread her arms in a sweeping gesture. "Look!" she said.

Dimly to my ears came the discordant notes of those who still celebrated the fall of Kaiserism. All about me the city lay. The moon came over the distant mountains, and I could distinguish by its light places familiar to my eyes. Over there was the great hotel section, the cafés and theaters. On my other hand loomed the tower of the city's greatest department store,

a landmark of the business section. Back of me the sleeping residences were marked by a deeper darkness cast by the trees which stood sentinel all about them.

Everywhere swift-moving shadows followed the glare of bright twin lights as automobiles darted about. Before hotel, café, theater, club and residence I saw them draw up to the curb. There were thousands of them—tens of thousands, as if every automobile in the city had left its garage and joined upon the streets those few which still carried the last revelers to their homes.

Then suddenly I rubbed my eyes. What was this golden ribbon which came from each car? Catching the moon's rays, it seemed as if each car was the hub of a great golden wheel which gradually extended itself until it touched some other wheel like itself. And still the expansion continued until the entire city was caught in a great golden web which enmeshed every store and house and hotel and club in its silky, filmy strands.

I turned to Future. "Yes," she said, in answer to my unspoken question,





"it is given you to see the automobile as it really stands in reference to the commercial life of the day. Were your eyes as young as mine you would see the golden webs reaching beyond the city limits. Into the country do they go. Into each farm house, to each small settlement. Away off into the mountains. To the mines. Into the deep woods to the lumber camps. Even to the sea—and across it.

"This web is golden wealth which the automobiles have brought to the world. Created from the inventive brain—demanding nothing from the air, earth or water which it would be improper for those elements to contribute—the automobile was born and has grown. Just as the miner harms none when he gives to the world the gold he has taken from Mother Earth,

so has the automobile given to the wealth of the world, without harm—with only the good that added wealth, increased business, high efficiency and the closer knitting together of humanity must always bring."

"But, Future, why do those limousines have their golden webs? Are they not cars of pleasure? How, pray, do they contribute to the wealth of the world?"

"And what is health, if not wealth? In the great war there was a word of which much use was made—morale. Without it the Germans were defeated. With it the Allies drained the cup of victory. Without morale none of us can do our best. Various called—spirit, pep, ginger—it is the push behind the American man of business which makes him the world marvel he

is. And health is necessary to morale. So closely is the automobile interwoven with the health and spirit of the nation that even the health-giving car of pleasure must no longer be classed as a luxury of the idle rich."

\* \* \*

*And so, as I gazed, the industry in which I played a small part took on a new meaning to me. Through me there surged a pride that had never come to me before. It was wonderful to be a part of this great thing which had revolutionized the world in peace and in war. With Future standing by my side, I gazed far, and there came to me a glorious conception of what it means to help in a great economic revolution where the stakes are better business and added efficiency for the whole world.*



"Suddenly, as I stared down into this beautiful shimmering web of gold, I saw it tremble and heave, as if gigantic forces were struggling just beneath its surface! And then—off to my left—I saw it torn asunder, and from underneath there emerged a great grasping hand. Soon to my right another appeared, and then another, and still another, until there stood several terrifying figures, misformed and hideous. Under their feet they trampled my beautiful web until the moonlight caught only a strand here and there—strands which seemed to struggle to keep from being utterly trampled into the dirt.

And these figures set up a terrific din. Each seemed to reach for the other, face distorted and hands clawing as if for another's throat. I covered my ears and shrank in terror.

"Oh, Future," I cried, "who are these terrible ogres who trample into the dirt the beautiful web of the automobile's weaving, and claw and scream and call each other such vile things?"

"That, my son, is not of my world. You are now looking at the works of Past. These figures are of Past's making. There you see Price-Cutter, over here is Long Trade, there Suspicion, Distrust, Overcharge, Poor Method, and all the rest of the automobile's evil genii. Through the years they have been struggling to tear down, *never to build up*. This that you see is their last effort. With them I do not have to do. Look!"

And then—out of the east—there came a most glorious figure of colossal proportions, dressed in shimmering white. Garbed as a gladiator of old Rome, with radiant face, as if eager for battle in a just cause, came this Champion.

As if forming a bodyguard, two other figures nearly as great in proportions accompanied him. Before Future spoke, I knew this great champion to be GOOD BUSINESS, and that he was accompanied by EDUCATION and CO-OPERATION. As they advanced, Future spoke:

"See Future's gladiators. Through all the ages, when what is now Past was then Future, they have been my champions. Fighting shoulder to shoulder, these three have overcome slowly but surely the hosts of imps which have beset them. Upon them Future stakes his cause. They have never failed me yet."

Then before my eyes there was staged a great battle. All of the hosts which GENERAL NON-ETHICS could muster were hurled against these three. Back and forth fared the tide of battle. For a time it seemed that SUSPICION and DISTRUST would triumph, and that GOOD BUSINESS would never establish itself on the automobile battlefield as victor.

Now and then various sections of the army arrayed against him seemed to be upon the point of triumph. Once it was LONG TRADE whose company seemed to be gaining ground. Again, POOR SYSTEM made a spurt. But—slowly—surely—each was pressed back until, as the light of dawn began to creep into the eastern sky, the last of the vile horde was pressed back against the mountains in the west and utterly crushed.

The excitement of the battle left me weak. Many times had my loyalty wavered. It seemed that the small forces of GOOD BUSINESS must surely succumb to the great army collected under the banners of the opposition. For a time it had seemed a losing fight, and I marveled at the courage with which these three fought in their cause of righteousness.

\* \* \*

"Thus have you witnessed the latest battle in a world-old war," said Future. "As old as is Past, he does not remember its beginning. Young as I am, I shall never see its close. For there is always a new recruit to step into the opposition ranks. Always must GOOD BUSINESS fight him who picks up and dons the armor of a fallen foe—fallen *because he who fights GOOD BUSINESS tactics must always lose*. With EDUCATION and CO-OPERATION, GOOD BUSINESS is invincible. Long drawn out the fight may be, *but sooner or later the tide must turn*. And now—behold!"

While Future spoke it had been rapidly becoming light. As the red of the coming sun crept into the sky I saw an unusual activity. Again the automobiles were on the go. Darting here and there, ever restless, they began to move the city's products. I saw the life-giving milk being delivered from house to house.

That fast-moving car was a doctor, whose skill to save a life was useless without the speed his car gave to him.

Across the country, far out, I saw the vegetable wagons bringing green stuff to a huddled-up community.

Great mills began to rumble.

Small men swarmed over skeletons of buildings being erected.

And everywhere through it all darted the automobile—a part of it all—a fundamental, essential, indispensable part of it all.

And again I saw the golden web catching the rays of the rising sun. Rapidly its broken strands were being put together by an army of workers. I turned to Future with a question upon my lips.

"They are the police which always follow the conquests of GOOD BUSINESS. That officer directing the work is ASSOCIATION, who reports directly to CO-OPERATION. Over there is TRADE JOURNAL, who re-

ports directly to EDUCATION. It is their duty to piece together the strands of the trade, and through constant hard work maintain the foothold GOOD BUSINESS has secured.

"If need be, they drop peaceful pursuits to wage individual war upon the recruits of SUSPICION and NON-ETHICS, who, though conquered, find their followers. Thus in time they establish harmony, not only in the trade which they serve, but in the ranks of those served by that trade.

"They turn customers from SUSPICION to RESPECT. They win over the tradesman from NON-ETHICS to GOOD PRACTICE. And their only weapon, decreed by time, is HOPE, dropped in the path of conquest by GOOD BUSINESS."

\* \* \*

I turned to the east. The sun, now above the horizon, caught my eyes, and—I awoke!

How long I had slept I know not, but my cold, cramped body was forgotten in the fire of determination which burned within me. A dream? Yes! But in that dream had passed in review the business in which I was engaged.

A bird's-eye view had been given me of its past, present and future.

I resolved to inject myself body and soul into the police work being done under the direction of GOOD BUSINESS. Many weapons were at hand, had always been at hand. Only the knowledge of the need and the spirit of the doer had hitherto been lacking.

And, as the years lengthened over the industry, I saw the fight being slowly won in every-day practice, just as I had seen it won in my dream. Dreaming, I had been awakened. And I, in turn, awoke others, until the army under the banner of GOOD BUSINESS so far outnumbered that of NON-ETHICS that the fight was hopeless for the latter.

I saw automobile owners look upon us with respect.

I saw just laws and reasonable taxation.

I saw SQUARE DEALING AND PROPER METHOD enter the doors of the industry.

I saw manufacturer and dealer discuss in harmony and good fellowship those things which interested them both.

I saw EDUCATION sweep clean the industry of its accumulated dirt.

Thus the industry came into its own—the largest in the world, builded upon Fundamentals, sustained through mutual confidence and kept alive by the pride and faith of tradesman and customer alike.

GOOD BUSINESS, CO-OPERATION and EDUCATION—these three in business—but the greatest of these is EDUCATION.

"ALL very fine, Reilly," said Henry Bennett the Redman distributor, "but how is a fellow going to expand his business and increase his sales of all these things out through the territory when he has a lot of dealers who don't know enough to go in when it rains?"

"Yes, how is he? You answer it?" retorted Reilly, Sennett distributor in and about Callawassa and friend of Henry from the baseball-in-the-sand-lot days.

"Huh!" Henry grunted. "You've been in business a long time. You were here when I started. You've grabbed off all the good dealers one by one until your bunch is the pick of the country. When

ly that. I have helped them become business men and executives and have almost forced some of them to make money in spite of themselves, but once they saw they could make money by doing the things I asked of them they swung over to my side of the argument and they have become fairly successful men.

"A dealer who can't make money is no good to me and I'm no good to him. He's got to make money if the contract is to be of any value to either of us. I've made my organization what it is—and that's what you've got to do if you want to make any money yourself."

"Yes, but—" Henry began.

"But nothing!" Reilly exclaimed.

last couple of years we have seen several big companies change from branch distribution to jobber distribution. And a few years ago we saw the factories all in a rush to dispose of their branches. The cost was too great and the arrangement unsatisfactory.

"And then some of the factories took their branches back because the distributors didn't justify their existence.

"The wholesaler of goods, especially such goods as cars and trucks and tractors, where each distributor has one or a few articles of merchandise, must be an efficient representative of the factory and must do all he can to increase the efficiency of the ultimate outlet—which

# Leaders Who Lead

By RAY W. SHERMAN

I started in I had to take what was left—and they are some bunch."

"Well—what are you going to do about it?"

"I wasn't going to do anything about it until you came in here and tried to tell me I ought to grab the big chance of today and expand my business while the expanding is good. You told me to sell a truck and a tractor and a farm light system and it's all I can do to get these ginks to deliver a car once in a while, let alone go out and sell one."

"Yes—"

## Make an Organization

"And after you show me the big opportunity in a departmentized automotive business I wanted to do as you told me but I can't. I haven't the organization."

"Why don't you get one?" Reilly demanded.

"Why don't I spit diamonds? How can I get an organization?"

"MAKE ONE!" And when Reilly said it he said it in such a way that Henry made no answer. The folly of years seemed to tumble about his head. He felt like a guilty man—but he didn't know why.

"Make one!" Reilly repeated. "That's what I had to do. I didn't go out and pick my dealer organization off a platter. What I've got I made. Just because I've had some of my dealers a long time you probably have an idea they were first class dealers when I got them. A few of them were and a lot of them were not. It has cost me a lot of time and money to build my organization.

"I took some of these dealers in hand when they didn't know anything except how to oil a car—and some of them hard-

"You've got to make an organization or get out of the way for some one who will make one. The distributor of the coming era is going to be more than a mere middleman who has goods shipped from the factory to the dealer while the middleman does nothing but bill the cars to the dealer and collect a rake-off. The distributor must justify his existence or he isn't going to exist.

"You can look around you in the trade and see that the movement began even some years ago. Some of the factories that insisted on good merchandisers in their dealer organizations dispensed with distributors in part, cut down the size of territories and took over the education of their dealers themselves. The result is that they have fine lines of dealers.

"And there are other factories that went at it from the other tack. They insisted that their distributors must MAKE good dealers. The result is that these distributors are men who believe in dealer-making. They keep after their dealers along the lines of better business. They teach them how to keep books, how to sell cars and how to make money. This has resulted in greater efficiency in the whole organization. It is, to my mind, the ideal arrangement.

## Merchandise and Its Distribution

"Merchandise must be handled through distributors if there is to be profit for the dealer and satisfaction for the consumer. It is not possible for a factory to take personal charge of every one of its retailers. It is too far away. The personal touch is lost. There is not enough direct contact between the source of product and the ultimate outlet—and the cost of distribution becomes too great. It has been tried. Within the

is the dealer. If the distributor doesn't do this he should not be allowed to distribute.

"In the future the makers of goods are going to pay more attention to how their goods are sold. They are going to take up dealer education and are going to insist that their distributors do the same thing. If the distributor can't wake up to the opportunity he is going to lose his distributing business. Some day, if you don't begin to build a real dealer organization, your factory will wake up to the condition in this territory and will make a change. Then you'll howl because your contract was unfairly taken away from you, whereas you will be entitled to just what you get. It is inevitable. There's no use, Henry, in trying to stand in the middle of the road of progress and expect not to get run over. It can't be done.

## Intensive Salesmanship Needed

"Some of the other automotive makers, such as the farm light people, are applying intensive methods. They are educating their dealers to real salesmanship and big distribution. If our trade were organized on these lines we could sell more cars than the factories ever could build.

"The same thing applies to jobbers as well as to car distributors. There must be dealer education or the middleman has no reason for being. His whole existence is founded on service and when he ceases to serve he writes his own obituary.

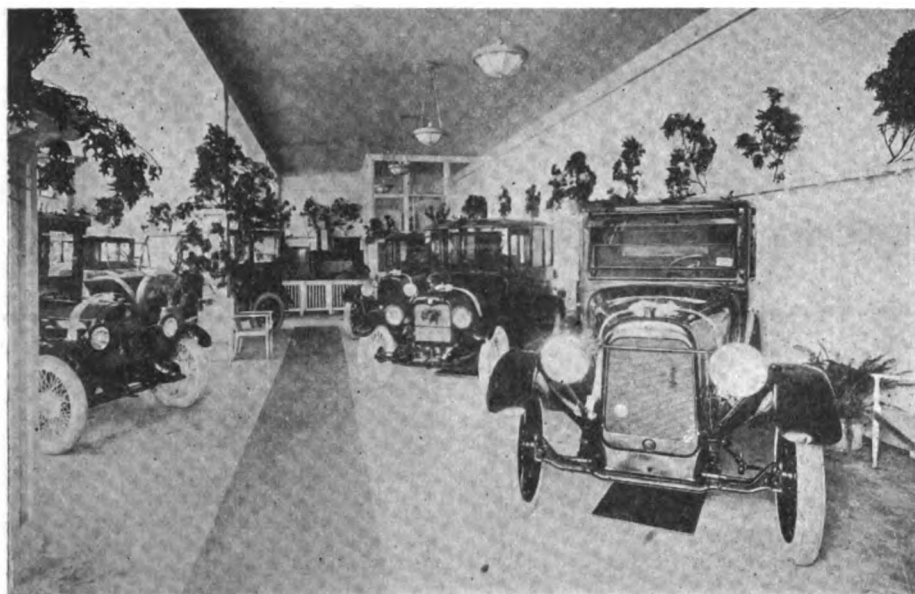
"Shake a leg, Henry! Shake a leg!"

And as Reilly donned his velour lid of emerald hue Bennett scrawled aimlessly on a sheet of paper, like an artist who is waiting for the birth of a big idea.

# Winter Business

The time is ripe  
for big business  
in Sedans.

Get your share.  
Start NOW.



*The Maxwell and Chalmers branch at Broadway and West Fifty-ninth Street, New York, has just held an enclosed car exhibition in its salesrooms as a starter for Winter Business*

lets, which, of course, are chauffeur driven types. From present indications there is not a question of a doubt but that this winter will be one of the greatest enclosed car seasons we have experienced for a good many years."

## Buy Used Cars

PHILADELPHIA, Nov. 23—The Overland-Harper Co., dealer in Overland and Willys-Knight cars, 14-18 South Twenty-first Street, is offering to buy for cash any Overland or Willys-Knight car that has received "reasonable treatment" and is not more than six years old on the following plan:

The list price of the car, less a fixed per cent for each year that has elapsed since the car was shipped from the Willys-Overland factory, an average deduction of 16 2/3 per cent a year over a six-year period.

## Hold an Enclosed Car Show in Your Salesroom

### Harry De Bear Says Results Are Surprising

**H**ARRY J. DE BEAR, manager of the New York Maxwell branch, launched an enclosed car exhibition of Chalmers and Maxwell cars, Monday, Nov. 11, to run for a period of two weeks. He claims the distinction of having presented the first automobile show to be held in the United States since peace was declared, and thereby feels entitled to the right to term it the "First Victory Automobile Exhibition."

There are on exhibition all types of closed bodies on both Chalmers and Maxwell chassis, including limousines, limousine landaulets, town cars, town car landaulets, sedans, touring sedans and cabriolets.

In discussing the results of the first week of the exhibition, De Bear said: "It is remarkable to note how quickly the public respond to the wonderful good news received regarding the termination of the war and how readily they are arranging to equip themselves with the enclosed car which has for many years been a real necessity, but which was being sacrificed this year due to the generally existing spirit of war-time economy and conservation."

"The fact that a good many folks who have dispensed with the services of chauffeurs are now re-employing them has stimulated considerably the sale of limousines and landau-



### Do You Really Want To Sell Your

We will pay you **SPOT CASH**, providing we can agree on price.

We pay highest prices because we do the largest Used Car business in Southern California and we must carry a large stock of cars at all times.

No delay except time required to investigate title.

**WE WANT YOUR CAR** or you wouldn't get this card.

We will appreciate your bringing the car in for inspection.

Call, phone or write.

**A. A. PETERSON COMPANY**  
1224-28 S. MAIN ST., LOS ANGELES  
PHONE MAIN 7228

Editor MOTOR WORLD: In your Winter Business Number you have an article on how to get used cars for sale. We send this card to all parties and advertise their cars for sale. It also goes to a selected list from the license directors. It brings good results—A. A. Peterson Co., Los Angeles. (The card is 3 1/4 x 5 1/4)



# How One Jobber Is Boosting Winter Business

*Motor Car Supply Co., Chicago, Opens Aggressive Campaign*

## What Are You Doing, Mr. Jobber?

**J**OBBERs have hoped and worked for a profitable Winter Business, one which would take the stock peak out and pull up the profits slump.

The Motor Car Supply Co., Chicago, of which the manager is Sidney F. Beech, who also is president of the jobbers' association, has undertaken an energetic campaign to keep its business going this winter at better than the normal rate.

It is sending a Winter Business message to dealers through "Our Messengers," a little 3¼ x 9 booklet of 108 pages, in which are displayed goods the dealer can sell this winter.

Pages from this book are illustrated with this story. The goods featured at the front of the book are anti-freeze, radiator compounds, heaters, chains, robes, steer warms, paper car covers, radiator covers, windshield clears, tire-savers, jacks, hydrometers, primers, radiator thermometers, winter tops, windshield slot strips, and other items.

Also at the front of the book are two pages urging dealers to get into the business of selling equipment for trucks and tractors. The company states that it is keeping a close watch on the field, and will be ready to supply the demands of the dealers in this new automotive field.

Dealers are urged to advertise their automotive business in the papers, to get around among the farmers and to read trade papers that are covering these activities.

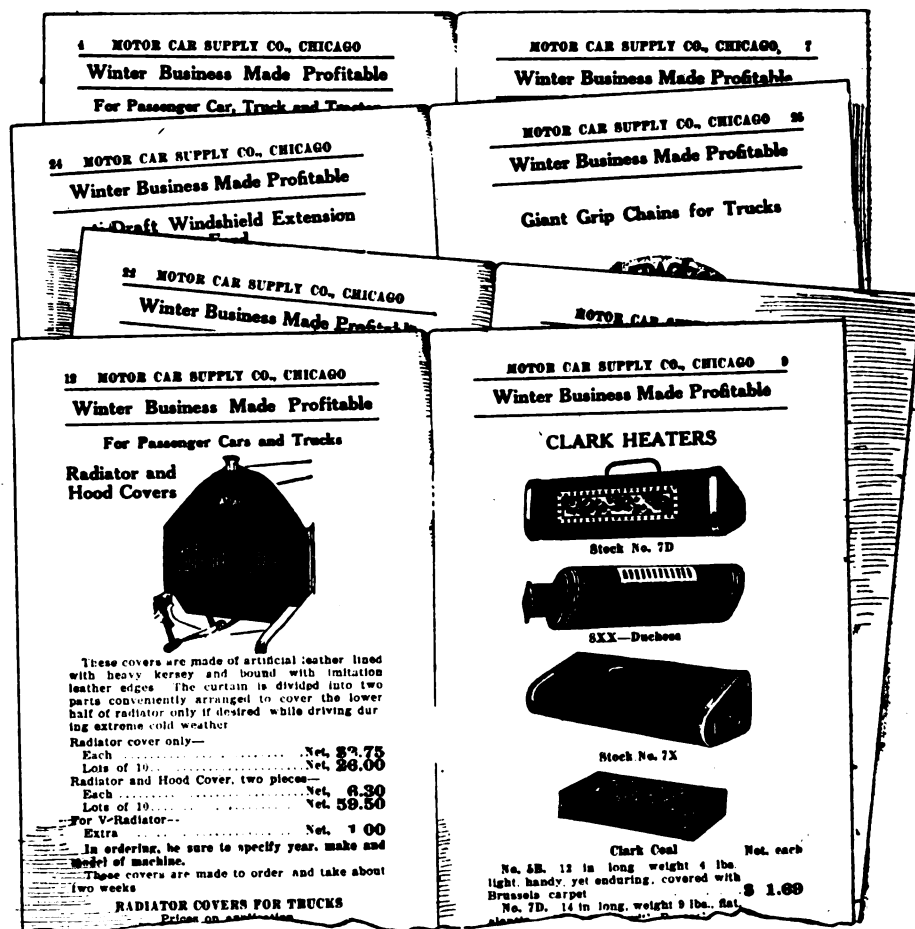
The Motor Car Supply's effort is one worthy of imitation by all the rest of the jobbing fraternity. It will be a long time before maximum Winter Business comes normally, but a concerted effort by all can hasten the day.

### Advertise NOW!

Begin advertising NOW—especially dealers in cars.

If you have cars in stock, fine! If you have no cars and can't get any, set aside an appropriation to be spent between now and March 1 and begin a systematic advertising campaign. There is daylight ahead. You will get cars in some quantity by spring. Don't let yourself be listed as a dead one by the public. Get back in the limelight. Keep people thinking about you—not your competitors.

If you have cars, urge buying now be-



Take a good look at the "Winter Business Made Profitable" slogans on the tops of these pages. Then read the story at the left. Then look at the slogans again. Then see what things your own jobbing organization can do to have "Winter Business Made Profitable"

fore the rush begins and depletes present stocks. State that the Government has lifted the lid on car production, has said shows could be resumed and that while production will come back it can't come back in quantity for months. The thing to do to assure a new car in the spring is to buy now, because next spring it prob-

ably will be the same old story of big demand and few cars.

If you have no cars advertise your rebuilt cars and tell people a good rebuilt car will always be a big value. Keep your name before the public—and tell them, if they must have a new car, to wait until you can give it to them.

## "Clemens Courier"

The above is the title of a bulletin issued by the Clemens Automobile Co., of Des Moines, to its dealers to stimulate them to greater effort in the disposal of their cars. We are reprinting a few paragraphs of wisdom anent Winter Business. Our advice is: "Read and digest."

OUR paint shop turned out a model 89-6 sedan last week which is one of the smoothest paint jobs that appears on the streets of Des Moines. The quality of our work is second to none and the prices are very moderate in comparison. Let us paint or revarnish your demonstrators and used cars.

Mr. A. C. Miller at Greenfield, Iowa, suffered the loss of his garage by fire several weeks ago. A new building is now under construction which will be considerably finer than the one that burned. Incidentally, do YOU carry insurance? Better check up and see that it covers your present stock and not the stock you had on hand several years ago.

This is the time of year to tell your customers how to drain the cooling systems of

their cars in order that they may not freeze. Better yet—sell them some alcohol for their radiators, advising them of the proper proportions for each degree of temperature. Also advise them that especially during the winter the oil in the crankcase should be changed oftener. This is due to the amount of raw gasoline which must come into the cylinders and which filters down past the piston rings before an explosion takes place.

This is the time to eliminate free service. The factory very liberally agrees to replace defective parts for a period of 90 days, but there is no reason why you should give any free service guarantee with the cars you sell. It is hard enough to make ends meet in the repair business without this added burden. Commence selling your cars on the same basis as other merchandise is sold.

# THE LAW

By George F. Kaiser

As It Applies to  
Dealers  
Repairmen  
Garagemen

## Model Garageman's Lien Law

Editor Motor World: Will you please advise us if you know of any "model garageman's lien law"? Which state has the best law? Will you kindly send us copies?—National Automobile Dealers Association, St. Louis, Mo.

Answer.—Answering your telegram addressed to me care of The Class Journal Co., I wish to say that I know of no "model lien law."

The law of New York is all right as far as it goes, but it does not go far enough, because it does not provide for the recovery of a car by the dealer when it is spirited out of his garage or repairshop without his consent.

The law of Illinois is better in some respects than the New York law, but in one respect it is inferior to the New York law—that is, in Illinois the dealer's lien is inferior to recorded conditional sales, while in New York it is superior.

In March, 1916, as counsel for the United Garage Association of this State, I prepared and submitted what I consider a model lien law to the New York Legislature, but it failed of passage. I am enclosing you a copy of that law herewith, and also a copy of the present New York and Illinois lien laws.

The New Jersey law is a very good one from the garage-keeper's viewpoint. There has always been more or less question as to whether or not it was unconstitutional on the ground that it deprived the motor car owner of his property without due process of law. It has just recently been held to be constitutional by the Court of Errors and Appeals of New Jersey, so it should be seriously considered when a lien law is about to be framed for a state which heretofore has had none.

If there is any further information I can give you, or in any way which I can be of service to you, please advise.

### "The Model Lien Law"

A person keeping a garage or place for the storage, maintenance, keeping or repair of motor vehicles, as defined by article eleven of the highway law, and who in connection therewith stores, maintains, keeps or repairs any motor vehicle or furnishes gasoline or other supplies therefor at the request or with the consent of the owner, whether such owner be a conditional vendee or a mortgagor remaining in possession or otherwise, has a lien upon such motor vehicle for the sum due for such storing, maintaining, keep-

## The Purpose

of this department is to help our readers smooth out the legal kinks that now and then cause them confusion in their business. What legal knots are you trying to untangle? Mail them to us. We will be glad to help you. In sending queries be sure to include copies of contracts and notes to which you refer.—  
EDITOR.

ing or repairing of such motor vehicle or for furnishing gasoline or other supplies therefor and may detain such motor vehicle at any time it may be lawfully in his possession until such sum is paid. The lien of such bailee on such motor vehicle shall extend to his right of possession thereof at all times until such sum is paid; and such bailee may by an action in replevin retake possession of the same from any person or place, wherever found and hold the same pursuant to the provisions of this chapter, for such storage, maintenance, keeping and repair.

### The New York Lien Law

A person keeping a garage or a place for the storage, maintenance, keeping or repair of motor vehicles as defined by Article 11 of the highway law, and who in connection therewith stores, maintains, keeps or repairs any motor vehicle or furnishes gasoline or other supplies therefor at the request or with the consent of the owner, whether such owner be a conditional vendee or a mortgagor remaining in possession or otherwise, has a lien upon such motor vehicle for the sum due for such storing, maintaining, keeping or repairing of such motor vehicle or for furnishing gasoline or other supplies therefor and may detain such motor vehicle at any time it may be lawfully in his possession until such sum is paid.

### The Illinois Lien Law

Garage keepers shall have a lien upon any motor vehicle, parts and accessories thereof, kept by them for the proper charges due for the keeping thereof, the repair thereof, the materials furnished thereto, and the expenses bestowed thereon at the request of the owner, or the person having the possession thereof; provided, that such lien shall not apply to motor vehicles, parts or accessories sold on conditional sale while the vendor remains unpaid; and provided, further, that the contract of sale or mortgage of the conditional vendor has been filed for record in the recorder's office in the county in which said sale takes place, before any lien sought to be enforced under this Act attaches.

Any garage keeper acquiring a lien, under the provisions of this Act, upon any motor vehicle, parts or accessories thereof, may replevin the same in any court of competent jurisdiction within the State of Illinois, for the purpose of enforcing such lien and thereby seize and secure the possession of said motor vehicle, parts or accessories thereof, wherever the same may be found within the jurisdiction of the court issuing said writ, provided that said motor vehicle, parts or accessories have not been sold to a bona fide purchaser and when he shall have so obtained the possession thereof he may hold the same for the enforcement of said lien in the manner as in this Act hereinafter provided. Such action shall be instituted within three months after the said lien attaches to said motor vehicle, parts, or accessories thereof.

Garage keepers acquiring a lien under this Act may enforce said lien by a sale of said property when possession of same is lawfully secured on giving the owner thereof if he and his residence be known, to the garage keeper having such lien, ten (10) days notice in writing of the time and place of such sale, and if said owner or his place of residence be unknown to the person having such lien, then upon his filing his affidavit to that effect with the clerk of the county court in the county where said property is situated; notice of said sale may be given by publishing the same once in each week for three (3) successive weeks in some newspaper of general circulation published in said county, and out of the proceeds of said sale the amount of said lien and costs shall be paid and the surplus, if any, shall be paid to the owner of said property. The provisions of this Act shall apply to all garage keepers, whether persons or corporations.

Wherever in this Act is used the term "garage keeper" it shall be construed to include all persons who for hire or reward publicly offer to store, maintain, keep or repair automobiles and other motor propelled vehicles and to furnish accessories and supplies for automobiles or other motor propelled vehicles for the transportation of persons or merchandise upon and over the public streets and highways; provided, that in municipalities wherein are in force any laws or ordinances relative to the regulation and licensing of garages, no person shall be entitled to avail himself of the provision of this Act unless he shall, during the period of whole time covered by this claim for lien have been duly licensed and shall have fully complied with all laws and ordinances relative to the licensing of garages.

DON'T FAIL to read Percy E. Chamberlain's Editorial in this issue of Motor World.

A Department of

## BETTER MECHANICS

No. 89

## Standard Operations on the Autocar Truck

## I—Rear Wheel Adjustment

1—Block the front wheel to prevent the car from rolling when the brake is released.

2—Release the emergency brake.

3—Put the gearshift in neutral.

4—Push out the clutch pedal until the pawl locks.

5—Place a jack under the rear axle close to the side spring.

6—Raise the jack till the wheel is clear of the floor.

7—Remove seven ½-in. nuts from floating drive axle.

8—Loosen the axle by driving a small cold chisel in the slot at the edge of the flange, then pull the axle out.

9—See that the brakes are not dragging.

10—Loosen the filister head screw in the lock collar with a heavy screwdriver.

11—Remove the small lock or key which is clamped between the ends of the lock collar and which extends downward into the slot in the rear axle tube.

12—Unscrew the lock collar, inserting a 5/16-in. drift in the filister-screw hole to turn it with. If an attempt is made to turn the collar by wedging something in the slot, the collar will be opened.

13—Slip off the lock washer which has a tit to go in the keyway on the rear axle tube.

14—Remove the wheel and the two Timken bearings. Both these bearings are the same size, but it is better to mark them and put them back the way they came out.

15—Clean bearings, axle, tube and all parts with kerosene, being particular to remove all grit and dirt from all bearing surfaces.

16—Pack bearings with grease.

17—See that the thin washer is in place back against the housing.

18—Replace the inside bearing on the tube.

19—Replace the wheel and the outer bearing.

20—Put the lock washer with the tit in place on the tube outside the outer bearing.

By J. HOWARD PILE

21—Replace the lock collar, using the 5/16-in. drift to turn it.

22—Tighten the collar till the wheel binds.

23—Loosen the collar back to the next keyway on the tube. There are six of these keyways and the lock or key that goes between the ends of the lock collar must go into one of these keyways.

24—Put the key in place between the ends of the lock collar.

25—Replace the filister-head screw and set it up as tight as possible with a heavy screwdriver.

26—Tap the collar gently with a hammer and tighten the screw again if possible.

27—Test the wheel again to see if the adjustment has been changed by tightening the lock collar.

*It is very important that the wheel lock collar be properly applied.*

28—Replace the driving axle and turn it around till the pin which is in the wheel goes into the hole on the driving flange.

29—Replace the seven ½-in. nuts on the studs, being careful to see that no dirt is between the flange and the wheel.

## II—Adjustment of the Brakes

1—The foot brake must not be adjusted on the cable.

2—Draw the bands together with the adjusting nut on top of the bands till the brake takes when the pedal is all the way up.

3—Slack off the nut till the wheel is free, but the brake takes hold as soon as the pedal is depressed slightly.

4—The emergency brake is taken up on the cable. Take up till the brake begins to take hold with the lever in the second notch, but the wheel runs free with the lever all the way off.

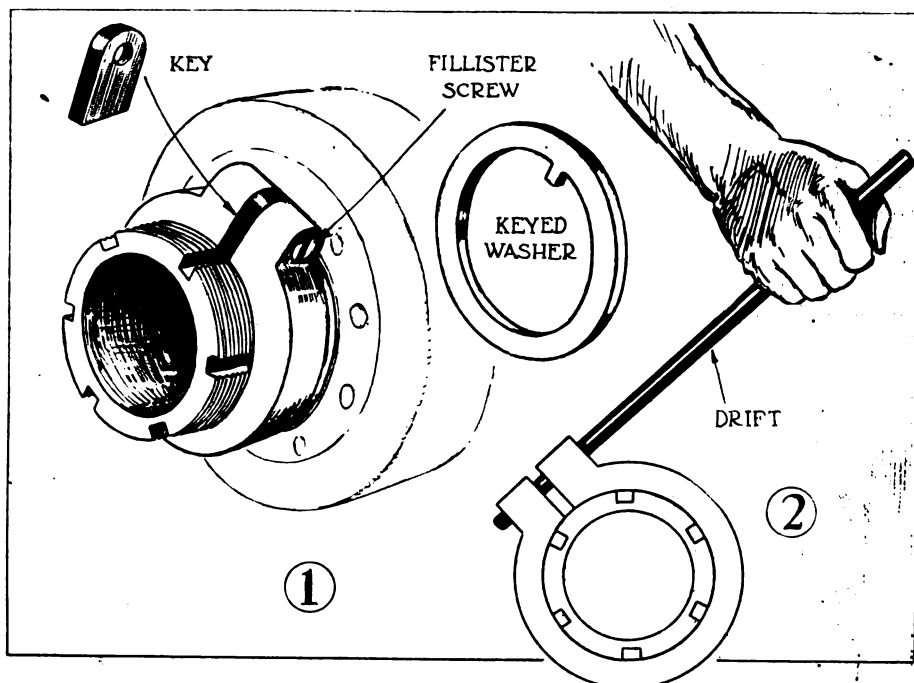


Fig. 1—The rear wheel bearing is secured with a keyed washer and lock collar with a key between the ends. Fig. 2—The lock collar is turned with a drift pin

### III—Removing and Replacing the Radiator

1—Drain off the water by opening the drain cock under the radiator.

2—Disconnect the three hose connections, the two smaller ones going to the top of the radiator and the larger bottom one going from the pump to the bottom of the radiator. These are disconnected by loosening one of the hose clamps and twisting the hose around until it is free of the pipe.

3—Disconnect the two radiator braces that go from the bottom sides of the radiator to the steering-post cross member. Removing the bolts and nuts from the cross member is the easiest and quickest way.

4—Remove the cotter pin from the starting-crank ratchet clevis pin.

5—Drive out the clevis pin.

6—Remove the starting-crank ratchet.

7—Remove the starting crank.

8—Remove the radiator front cross member by taking out the two  $\frac{1}{2}$ -in. cap screws that go through the bumper bracket.

9—Remove the nuts from the radiator hanger studs.

10—Lift off the radiator.

*If the car is of the latest type with the high radiator it will be necessary to loosen the seat structure and raise it slightly.*

In replacing the radiator the hose connections should be renewed if they are leaky, oil soaked or otherwise unserviceable. The two top pieces of hose are  $\frac{1}{4}$ -in. inside diameter, 3 ply,  $3\frac{1}{2}$  in. long each. A 7-in. piece will therefore be sufficient for both sides. The pump inlet hose is moulded and had best be procured from the manufacturer or nearest service station.

11—Put a leather washer on each of the hanger studs. These washers are to be cut from leather about  $\frac{3}{16}$  in. thick and made to fit the stud.

12—Raise the radiator into position and support it with the knee.

13—Apply the hanger-stud springs and nuts.

14—Tighten these nuts so that the radiator is firm, but not too tight. *Leave plenty of room for spring action or the radiator tubes will loosen at the reservoir connections.*

15—Apply the radiator braces, replacing the nuts and bolts at the cross member.

16—Loosen the locknuts on the radiator braces.

17—If necessary adjust the braces so that the radiator will hang plumb by

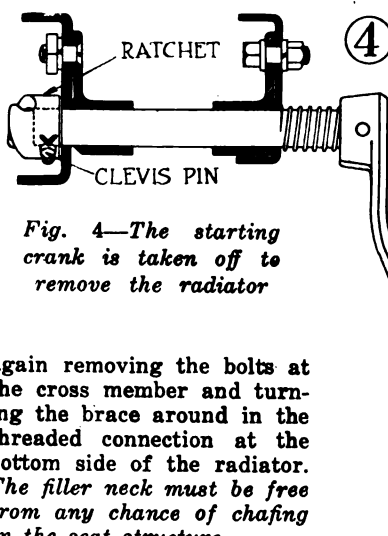


Fig. 4—The starting crank is taken off to remove the radiator

again removing the bolts at the cross member and turning the brace around in the threaded connection at the bottom side of the radiator. *The filler neck must be free from any chance of chafing on the seat structure.*

18—When the adjustment is correct tighten the locknuts.

19—Make up the three hose connections, using new hose if necessary.

20—Replace the radiator front cross member.

21—Replace the starting crank.

22—Replace the starting-crank ratchet.

23—Replace the clevis pin.

24—Replace the cotter pin in the clevis pin. If a new one is required the size is  $\frac{3}{32}$  in.

25—If the drain cock on the radiator is leaky it should be replaced. It is a  $\frac{1}{4}$ -in. standard T-handle brass pet cock.

26—Be sure to put cotter pins and lock washers in all places that require them.

### IV—Packing the Water Pump

1—Unscrew both packing nuts. Both these nuts turn to the left facing the car. That is the front nut has a right-hand thread and the rear nut has a left-hand thread.

2—Pull out all the old packing, using a cotter-pin puller on sharp-pointed hook.

3—Apply two new rings of packing to each end of the pump. This packing is  $\frac{1}{4}$ -in. square woven flax packing impregnated with grease. The rings are cut the exact circumference of the shaft by curling the end of the piece around the

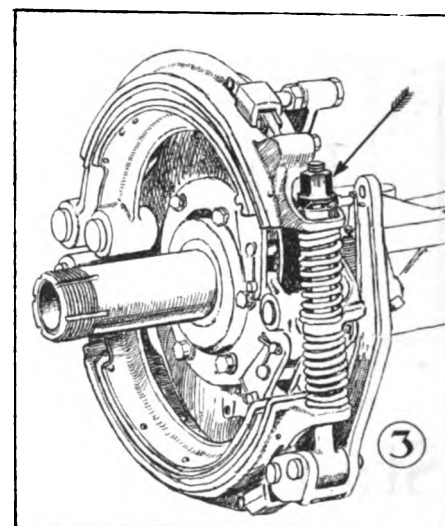


Fig. 3—The foot brake is adjusted with this nut

shaft and cutting it off with a sharp knife exactly where the turns meet. Space the joints so that both do not come together.

4—Be sure that the rings are inside the loose washer, or between the washer and the pump itself.

5—Force the packing in by setting up on the nuts, using the Autocar standard wrench for the purpose.

6—Remove the packing nuts again and apply another ring to each end, making a total of three rings in each end.

7—Tighten the packing nuts again and set them up a little more than tight enough to stop the leaking. In other words, tighten till the leak stops, then give them another half turn.

### V—Adjusting the Front Wheel Bearings

1—Apply the emergency brake.

2—Place a jack under the front axle.

3—Raise the wheel off the floor.

4—Remove the hub cap with the hub-cap wrench. This is not locked on, but is held by screwing up tight, so there is no key or lock to loosen before removing the hub cap.

5—Remove the cotter pin from the spindle.

6—Remove the nut from the spindle.

7—Remove the lock washer from the spindle.

8—Pull off wheel and bearings. The inner bearings in the front wheels are larger than the outer ones.

9—Clean the bearings, spindle and hub cap with kerosene.

10—Pack the bearings with grease.

11—Replace the bearings and the wheel.

12—Replace the lock washer.

13—Replace the nut and tighten it till the wheel binds.

14—Slacken the nut back till the next slot in the nut coincides with the hole in the spindle.

15—Test the wheel to see that it turns freely.

16—Replace the cotter pin and be sure to spread the ends.

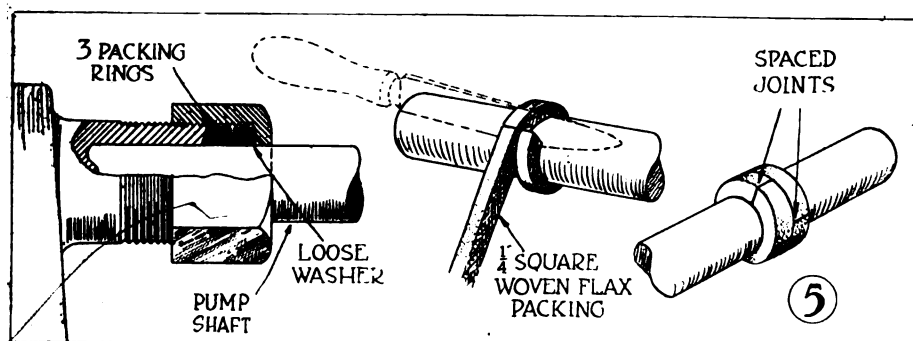


Fig. 5—The pump is packed with rings of square woven packing, the joints being spaced

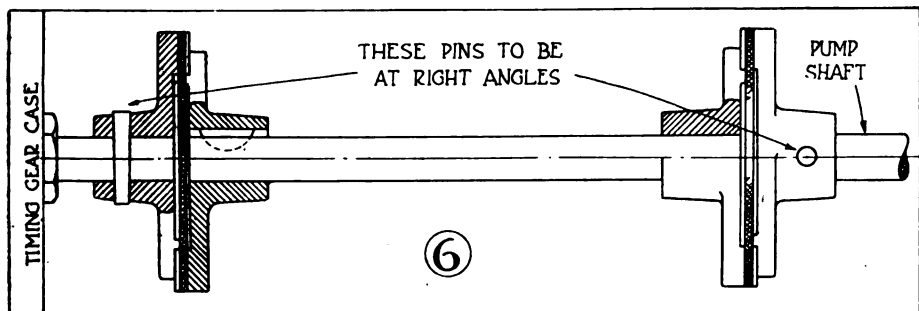


Fig. 6—The starting crank is timed correctly when these two clevis pins are at right angles

- 17—Fill the hub cap with grease.  
18—Replace the hub cap and screw it up tight.

#### VI—Timing the Starting Crank

It is much easier to start the engine by pulling the crank up against compression, rather than pushing down against it. The crank must therefore be set or timed so that this will be possible. The correct setting is obtained when the clevis pin in the rear end of the pumpshaft is at right angles to the clevis pin in the front end of the crankshaft. This will place the starting crank a little past center, either top or bottom, when the piston starts on the compression stroke. If the crank is not in this position—

- 1—Remove the bolts and nuts from one of the flexible couplings that connect with the pumpshaft or crankshaft.

- 2—Remove the bolts and nuts from the other coupling.

- 3—Place the short shaft which is now free in such a position that the clevis pins mentioned in the first paragraph come at right angles to each other, turning the crank as may be necessary.

*Note that the sliding end of the shaft is to be placed next to the crankshaft.*

- 4—Connect up the bolts and nuts on each of the flexible joints.

Take care that no two solid parts of the coupling are bolted together, a solid member must be bolted to the flexible disk in every case.

## Testing the Starting Motor

Editor Motor World: In the May 15 issue you told how to build an electrical testing device for starting motors. What kind of voltmeter and ammeter should be used in connection with this testing set?—Othes Wheat, Belton, Tex.

Reply—Inasmuch as the test is made with the current from the storage battery the scale of the meters will not have to go much above the capacity of the battery.

If the motor to be tested is a 6-volt, then a 6-volt battery is used and a voltmeter with scale 0-15 will be sufficient. A 12-volt battery would require a 0-20 or 0-25 scale. Many of the voltmeters are made with a double scale and three poles, so that the instrument has more than one capacity.

The ammeter will have a scale of 0-200, 0-250 or 0-300 amperes, or by means of a double scale, as on the voltmeters, more than one capacity can be obtained.

The motor is tested by running it without any load at first and observing the readings. A high amperage and slow speed will indicate tight bearings or shorts in the armature or field circuits. If the current is not high, but the motor will not get up speed, the brushes, connections or commutator may be at fault.

The load test shows whether the motor will deliver its full power at the required speed and with the proper current con-

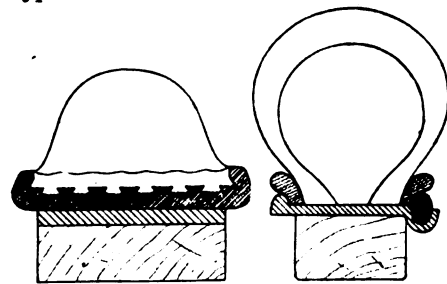
sumption. A motor turning at 2000 r. p. m. and using a current of 135 amperes at 6 volts should exert a torque of 1½ ft. lb., and if the pulley were 6 in. in diameter, the pull on the scale would be 6 lb.

When making the test, the motor is started and sufficient pressure is applied to bring the spring scale to the required reading, then the voltmeter and ammeter are read and recorded and these readings are compared with the readings from a motor known to be in good condition. A low reading would indicate that the armature or field are in bad condition. These defects can then be tested out with a lamp in circuit with a battery.—Editor.

## Solid Tires for Pneumatic-Tire Rims

Editor Motor World: Is it possible to get solid tires which will fit on regular Q.D. rims used on a passenger car? We are rebuilding this car into a truck and would like to equip it with solid tires.—Star Garage, Rockdale, Tex.

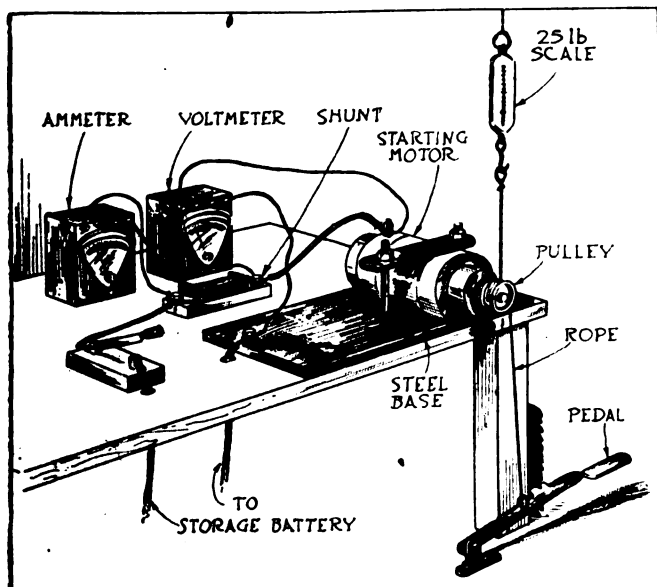
Reply—The principles of construction and application of solid and pneumatic tires are so different that so far no one has made any attempt to fit regular solid truck tires to rims which are designed for pneumatic tires. The solid truck tire is made with an integral steel base or rim which corresponds to the rim in the pneumatic tire. Immediately over this base is a layer of hard rubber which is molded to the steel, and the softer tread rubber which provides the elasticity is in turn molded to the hard rubber. The felloe of the wheel to which the solid tire is to be applied is surrounded by a steel band called the felloe band. This is shrunk on the felloe and the outside forms a tight fit inside the tire band. When the tire is to be removed or put on, the wheel is put in a powerful press and the tire with its band either pushed on or off. This type is called the "Pressed-On Type."



Showing the difference in construction of the two rims

There are also demountable types in which the solid tire with its steel base may be removed without pressing, the band being held on with bolts in a manner somewhat similar to that employed in pneumatic practice.

The cheapest and in the end the best way would be to get a new set of wheels built specially for solid tire work. The felloe would be correctly banded and the band would fit the tire band of the standard makes of tires.—Editor.



Testing the starting motor with a brake and meters



# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1609—WELDING A BEARING CAP

A broken bearing cap is welded in perfect alignment by only filing away the middle part of the break for the weld, the ends being left in their rough condition so that when they come together, the two parts of the cap will be just as they were before the break took place. The welding is started in the center and worked outward both ways. The edges can be made hotter than the center and this makes the metal flow better and eliminates air bubbles.—L. Ralph Miller, Kennedy Bros. Garage, Dodge City, Kan.

## No. 1610—BUFFING WHEEL TO REMOVE CARBON

A buffing wheel on a flexible shaft is used to facilitate the removal of carbon from around the valves and tops of pistons of detachable-head engines. The flexible shaft is an old speedometer shaft coupled to the end of the shaft of a small motor, the motor being operated by connecting it to the lighting circuit.—Ray L. Martin, Texas Motor Car Association, Fort Worth, Tex.

## No. 1611—WELDING A GEAR

In welding a broken gear which has a boss preventing it from lying flat on the table, the gear is placed at the end, the boss hanging over. A bent rod is then put in the hole, a weight on the end of the rod balancing the gear so that it will lie flat, the broken section remaining in its correct position.—L. Ralph Miller, Kennedy Bros. Garage, Dodge City, Kan.

## No. 1612—TIMING THE CURE ON TIRES

A device for timing the cure on casing retreads is made in the form of a clock face with a movable hand. This is cut from a piece of pasteboard and the circle should be about 7 in. in diameter with large figures so that it can be read from any place in the shop. The spaces between the hours are divided into four parts, each representing 15 min. The hand is made of a narrow strip of thin metal. The "clock" is set at the time the cure should be completed, hung on the kettle, and then any one of the men can stop the cure when the time limit is reached.—L. A. Hunting, Mt. Washington, Mo.

## No. 1613—REPLACING AXLE-LOCKING COLLARS

Rear axle locking collars on the Overland and Mitchell are put in place with a handle made from a piece of  $\frac{3}{8}$ -in. drill rod 6 in. long. A standard thread is cut

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

*1—Describe the shortcut briefly but clearly, in few words.*

*2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.*

*3—Write on ONE side of the paper only.*

*4—Sign your name and initials, the name of the company you are with, and the town.*

*Write plainly. If your name is unusual, print it in capital letters.*

on one end for a distance of  $\frac{3}{4}$  in. This is screwed into the bottom half of the collar, the other half is slipped over the top and the bottom half pulled up into place so that the screw can be put in place in the other hole. The piece of steel is then removed and the other screw put in.—L. R. Peterson, Logan Garage & Supply Co., Hyde Park, Utah.

## No. 1614—FINDING THE COTTER-PIN HOLE

A castellated nut can be turned exactly to the right position to insert the cotter pin if a notch is filed in the end of the bolt or stud parallel with the hole. By

bringing the nut so that the notch points to a castellation at each end, the cotter pin will slip right into place.—Ed. Frisz, Smith Garage, Indianapolis.

## No. 1615—STORAGE BATTERY HANDLE

An adjustable handle to carry the battery with one hand is made from a piece of steel or iron notched to catch the hooks which lift the battery up by the two regular battery handles. The hooks are made of drill rod with a flat loop on the upper end and a hook on the lower end. The notched piece is 15 in. long and the notches are placed 2 in. apart. Some electric tape wrapped around the central part prevents the bar from cutting the hands.—Bernard Shay, Herm Auto Co., Minneapolis.

## No. 1616—BROACHING VALVE STEMS

Valve stems are broached for flat cotter keys by drilling holes through the stem at the proper place and cleaning the slot out with a tool made for the purpose. A jig to insure the accurate drilling of the holes is made from a block of steel with a hole the exact size of the valve stem through it. Three or four holes the diameter of the width of the slot are drilled at right angles and into this hole. The broaching is done with a flat tool, the valve stem being held in the vise.—George Grillier, manager, French Machine Shop, Red Bank, N. J.

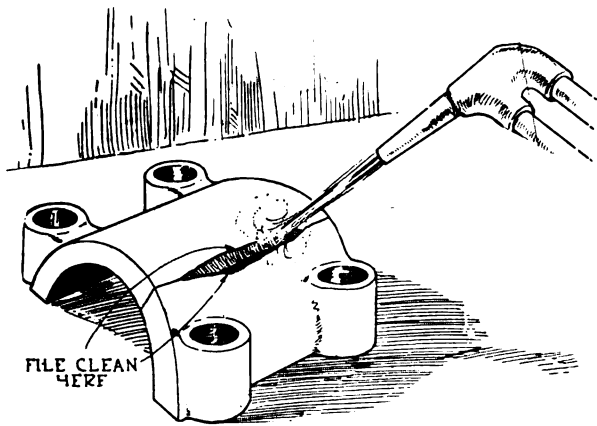
## No. 1617—LONG HANDLED PLUG WRENCH

A long handle for a plug wrench is made from a piece of  $\frac{3}{8}$ -in. pipe 15 in. long, squared and pinned to the wrench at the lower end and drilled at the upper end for a piece of  $\frac{3}{8}$ -in. drill rod for the cross handle. This lifts the cross handle clear of all parts of the engine.—Joseph D. Tanner, Davis Motor Sales Co., Toledo, Ohio.

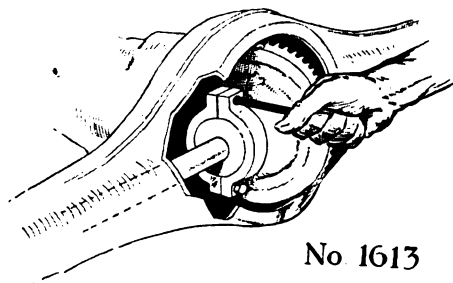
## Philadelphia Considers a Show

PHILADELPHIA, Nov. 23—The Philadelphia Automobile Trade Association is considering the feasibility of holding its 1919 show, although if it is decided to do so it probably will be much later than the usual date—Jan. 10. A. E. Maltby, president of the association, said:

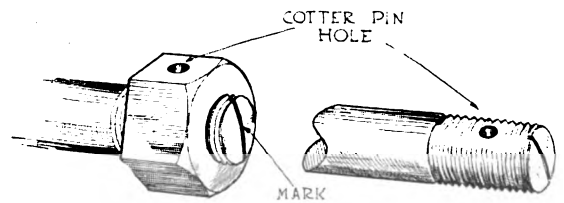
"I do not see now why we should not hold a show to stimulate and keep up interest. However, it would be hardly possible to have it at the usual time in January. I would be in favor of having it either in February or even March."



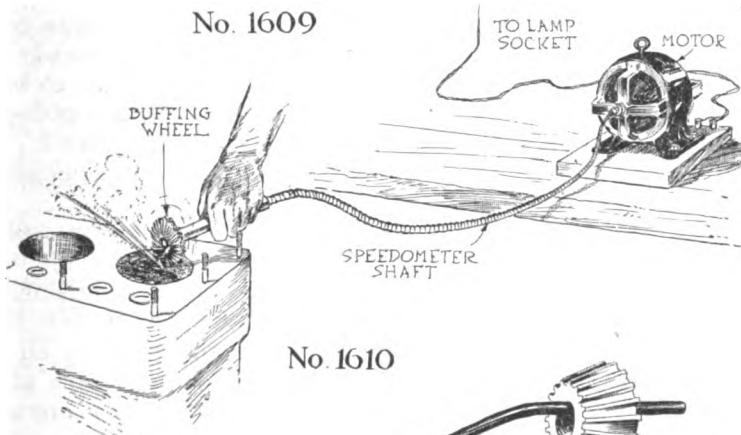
No. 1609



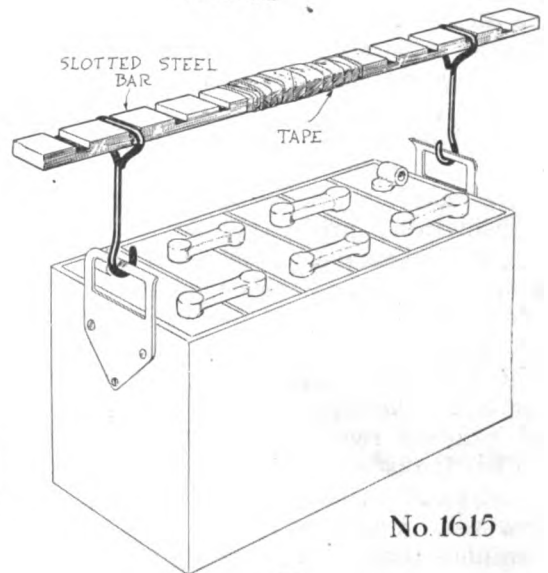
No 1613



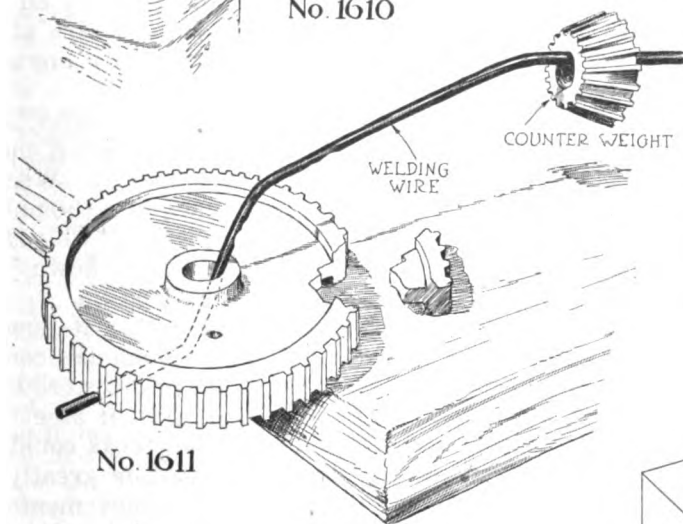
No. 1614



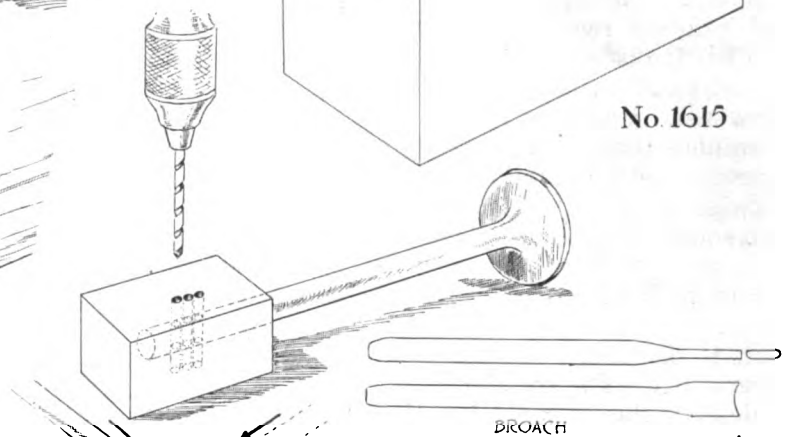
No. 1610



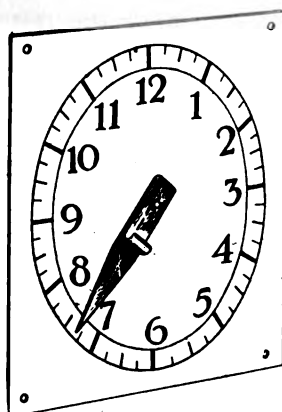
No. 1615



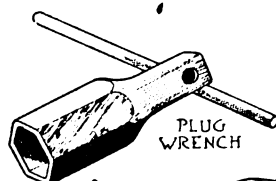
No. 1611



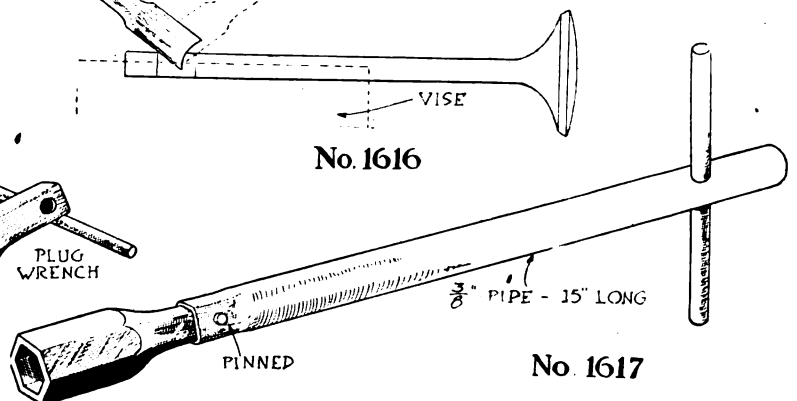
No. 1616



No. 1612



PLUG WRENCH



No. 1617

# Editorial Observation

## Wise Speed

**T**HERE is need in the trade and industry at this time for a lot of cool-headed stability and wise action.

Things are in such condition and the state of mind is such that a few unwise moves may do a lot of damage.

We all recognize the fact that our industry will—and must, whether it will or not—return to production in a short time. Real manufacture cannot return to former proportions until late in the summer, but there will be considerable production in the meantime.

Some factories will be able to jump back at once to considerable production by using accumulated stocks, but when these stocks are gone their production may fall rather than increase. Real manufacture cannot get back to former volume for quite a while because new materials and parts must be bought in the market and this NEW stuff may be slow in coming. The demand for steel in France, the delayed building requirements, the railroad program, and other industrial necessities will tend to keep steel mills busy and prices up.

However, regardless of the facts, the public is of the opinion that prices are going to tumble. This impression will prevail until the buying public is otherwise educated. Wherefore, at last week's Pittsburgh show the publicity given out and widely printed had to do with the statement that prices cannot be expected to fall for some time to come and that buyers should not hold off, but should buy now.

This is the plan of attack that should be followed in every city. Buyers should be urged to buy now and dealers should get busy at once and start real selling campaigns. Selling must begin at once if serious consequences are not to follow.

The paramount reason why the public should buy and the dealer should sell is that there are more cars in stock around the country than some people believe. For months we have heard it said that there was a shortage of cars—but it isn't true. Some lines are short and others are very, very long, and in some sections there is a serious need for buyers rather than for cars.

Investigation by Motor World in large centers has revealed that on the Pacific Coast stocks are high. In one big Coast city there are 5000 new cars unsold. In this city there are about 2500 used cars awaiting buyers.

In another city there are about 600 new cars and 500 used cars.

Some cities have smaller stocks than others, and some lines have been out of cars for months.

Were sales to speed up at once these stocks could soon be cleaned out and the dealers made ready for the coming production. The difficulty seems to be to get the public over its idea that prices are going to tumble and that the wise thing to do is to wait.

For this reason there should be very cautious action in reducing prices.

If price cuts come too rapidly much harm will be done. In case the manufacturer rebates his own dealer, who has bought cars at previous high prices, the particular dealer will be helped rather than harmed, because it will enable him to move all his cars at a profit. The dealer who has no cars at all and who must await production won't care anyway, because he has no stock to get rid of.

The harm will be done to those dealers who have stocks on hand at high prices and who must move them at high prices in order to come clean. Wherefore, if a few manufacturers announce cuts the public is going to be encouraged in its belief that all prices are coming down and sales will be slowed down just at the time when they should be speeded up.

If all prices were lowered at once with a statement that these prices would stand for four months conditions would be stabilized. Or, if no prices were lowered at once the dealers could back up their assertion that prices will not fall soon and the stocks could be moved. The shows will help the situation greatly.

There must be stability and wise movement all along the line from the iron ore to the finished product.

If the right tactics are pursued in the return to production the dealers can be protected, the sales resistance can be overcome and stocks can be cleaned out.

And if cars are sent to sections that need them and are withheld from sections that do not need them the situation will be materially helped.

There is opportunity for the more favorably situated manufacturers to benefit themselves greatly by making the way hard for the less fortunate members of the industry, but there should be at this time a maximum of co-operation. All should remember this, that the ultimate great damage will be to the dealer and NOT to the factory and that every time a dealer is ruined a root has been cut from the world's third largest industry.

Could not the N. A. D. A. and the N. A. C. C. get together on this subject?

## Letters from Readers

*THIS page is for the use of MOTOR WORLD readers with something to say. Letters on subjects of interest to dealers, garagemen, repairmen and jobbers are always welcome.—EDITOR.*

### Brothers All

Editor Motor World: 1—Answer to your letter of Nov. 4 on above subject has been delayed on account of absence from the office.

2—I have always been of the opinion that it is desirable to have co-operation between the organization of motor car manufacturers and any stable or proper organization of automobile dealers. Unfortunately there have been some attempts to form dealers' organizations which have not been based upon sound principles and they have fallen by the wayside.

3—The present National Automobile Dealers' Association seems to be well officered and founded upon a permanent basis, and there certainly should be co-operation between that association and the National Automobile Chamber of Commerce. I am not sure that joint meetings at fixed times would be advantageous, but the officers and directors of the respective organizations or other representatives should get together whenever there is any matter of mutual interest to discuss, and general meetings probably could be arranged without serious inconvenience at show times. Your editorial entitled "Brothers All" will no doubt bring about crystallization of thought on the subject.—C. C. Hanch, Chief of the Automotive Products Section of the War Industries Board, Washington, D. C.

Editor Motor World: I have your letter under date of the 4th attaching copy of an editorial—"Brothers All"—that will appear in an issue of Motor World. I regret that your letter should not have been more promptly answered, as I assume in all probability the issue referred to has gone to press.

I have read the editorial carefully and am very heartily in sympathy with the suggestion made by you. I believe that the intention of the National Association is to effect betterments in the condition of the dealers and make their efforts for the manufacturer more satisfactory and successful from both the dealer's and manufacturer's standpoints.

I think there should be the closest possible bond between the manufacturer and dealer, and I think that your suggestion is par excellent for bringing about the result that we are striving to attain. The closer the manufacturer can be kept in-

formed of the requirements and necessities from a dealer's standpoint, the more successful will be the automobile business.

I, therefore, would be strongly in favor of a joint meeting of the Manufacturers' Association and the Dealers' Association at stated periods during the year.—The Studebaker Corporation of America, Minneapolis Branch, J. A. Graham, Manager.

### Page "Mr. Bantley"

Editor Motor World: After reading C. H. Bantley's article on corn cultivation in your Nov. 6 issue I decided he must be more of an expert planting corn than most of us if he can always get all rows exactly the right distance apart and never have any uneven ground and no weeds, so he can keep it clean plowing only one way. And what nice, loose ground he would have behind his heavy tractor loosened up by a light harrow. And how long would it take him to pay for a 300-acre farm raising cow peas and, say, beans? About as much space wasted on the world's largest truck and tractor show at Chicago. Plenty of country towns of 1000 population make a bigger show in 2 hours' time than all that was shown there except Ford accessories.—Clark Kester, Lone Tree, Iowa.

P. S.—At that, I get lots of good information from Motor World.

### Charging Storage Batteries

Editor Motor World: I am living in a town that has no electric service of any kind and would like to put in some equipment for charging storage batteries. I have thought of using a generator from some car, running it with a 1½-hp. gasoline engine, making the connections through an ammeter. I would run the engine at the proper speed to give the required current. Do you think this would be satisfactory? Do I need a voltmeter in the outfit?—Edward Brehm, Buffalo Grove, Ill.

Reply—The scheme which you have in mind of using a generator operated by a 1½-hp. gasoline engine would be satisfactory for charging a storage battery, but we are under the impression that you intend charging these batteries for

customers; in other words, that you will have a considerable number of batteries to charge. If such is the case, this scheme would not work out satisfactorily on account of the cost.

The generator which you have in mind would only charge one battery at a time, and it would be necessary to run the engine the entire time to charge this one battery.

A very much better scheme would be to secure one of the farm light and power systems which are now on the market and which can be used to charge a number of batteries at the same time, and also give you electric light and power for other purposes around the shop.

While the installation of your scheme would, of course, be cheaper in the first place, the ultimate cost would be very much greater. The farm lighting system, while costing more, uses very little fuel, and, in fact, will not use any more fuel than the 1½-hp. engine which you propose using, but by enabling you to charge more than one battery at a time, and by giving you power for other purposes, it will in the end prove a great economy. We would not recommend you to make the installation that you suggest.

A voltmeter is quite necessary in the outfit, and if you buy a farm lighting system a switchboard will be provided with the outfit, and this switchboard will include both voltmeter, ammeter, starting switch and all necessary equipment. You can secure a farm lighting system without the engine, and if you have the engine this will save a corresponding amount in the purchase price. The outfit suggested would include generator, storage battery and a switchboard.—Editor.

### Gear Ratio and Horsepower

Editor Motor World: Can you furnish the high-gear ratio and horsepower of the Chandler Six, Auburn 6-44, Buick E-49, Hudson Super-Six, Jordan J-60, Mitchell C-42, Kissel Hundred-Point Six and the Studebaker 6-50? Can you tell me at what engine speed the maximum power is developed in these cars?—Ray J. Kissinger, Glenvil, Neb.

Reply—The Chandler Six was made in the years 1913 to 1918, inclusive. The 1914 and 1915 models had a gear ratio of 4:1, the 1916 and 1918 models 4.40:1, and the 1917 model 3.40:1. The horsepower by N. A. C. C. rating was 27.4 in 1914, 1916 and 1917; 33.75 in 1915, and 29.4 in 1918. We have no data on this car for 1913.

The Auburn 6-44 is a 1918 model and has a gear ratio of 4.08:1 and a horsepower rating of 29.4.

The Buick E-49 is also a 1918 model, the gear ratio being 4.61:1 and the horsepower rating 27.34.

The Hudson Super-Six was made in 1916, 1917 and 1918. The gear ratio was 4.45:1 and the horsepower rating 29.4 for all three years.

The Jordan 60 had a gear ratio of 4.45:1 and a power rating of 29.4 for the

1918 model. This model was also made in 1917 but we do not have the data on it.

The Mitchell C-42 is a 1918 model with gear ratio of 4.25:1 and power rating of 29.4:1.

The Kissel 100-Point Six was a 1917 model with gear ratio of 4.58:1 and a horsepower rating of 25.35.

The Studebaker 6-50 was made both in 1916 and 1917, both models having a gear ratio of 3.70:1 and a power rating of 36.04.

The horsepower ratings we have given you are computed by the N. A. C. C. formula, which takes into consideration only the bore and number of cylinders, and is really only a guess. It is not possible to give you the actual brake horsepower developed by these engines nor the speed at which they develop the peak of their power. The Hudson is a high speed engine and probably gives the highest output at about 3000-3400 r.p.m. The other engines are designed to run at slower speeds than this.—Editor.

### Back to Business

Editor Motor World: I am very much interested in your editorial in the issue of Nov. 6. The spirit of co-operation and the work done by the automobile dealers and accessory men during the war have served to awaken them to what can be done to the benefit of their own business and business problems by exercising the same effort in it that they have in the various War Savings, Liberty Bond and other organized drives. There is no question but the peace treaty will be signed in a way that will be beneficial and encouraging to every American citizen. America will be looked to as the leading nation of the world for several generations.

For the past eighteen months we have been using all our energies and looking forward to winning the war which we have won, and now is the time to start using our energies and looking forward to putting business back where it belongs, building it up, furnishing employment to the returning soldiers, and holding before the world the reputation we have gained in winning the war.

We won the war because we were intelligent enough to know how to do it, and every true American citizen used his energy in the one direction. We can win for our business the same success by using the same energy in the same direction, and the time is here to start.—N. T. Miller, Des Moines, Iowa.

### Helping Uncle Sam to Recruit Mechanics

Editor Motor World: Thinking it might be of interest to your publication we are enclosing a small photograph of one of our windows painted up for the American Red Cross in the enlistment of drivers and mechanics. We are doing this voluntarily for the aid of the American Red Cross, Department of Personnel, South West District, with headquarters in the Railway Exchange Building, St. Louis, Mo. By this means we have enlisted approximately 150 men for this service, same being handled by the writer.—Tate-Gillham Motor Car Co., St. Louis, per Frank R. Tate.

### Another Frank Stanley Letter

From: Frank J. Stanley, 1st Lieut., U.S.A.

To: Editor Motor World.

Subject: Where do we go from here?

I was just wondering about that. Now that I am through bleeding and dying around West Point, Mississippi, I imagine that ere long the Adj. Gen. will permit me to soak my medals in lard oil and put them away for future generations. But, no fooling, Ray, you can't imagine the keenness of the disappointment in never having the chance to get to the other side. Very much, I should say, as a fellow would feel who had bought a ticket to a banquet and found after he got there that his ticket called for standing room only. But there are plenty of them in the same fix that I am in, so I suppose that the next best thing to do is to organize with the swivel chairs and hire some good writer to get us up some thrilling tales to tell our grandchildren.

I have just thunk a think that may be

of some interest to you. Don't know how much you have delved into the structural end of the motor industry, but I suppose you have noticed at times some of your advertisers springing something about how fine their product was because it was cast or rolled or tested or tempered in some way entirely different from the way some one else did it. That makes interesting reading and good copy and is rather awe-inspiring and all that, because none of the trade understand just what has been done to the product, but they will take it for granted that it is better and say that it is fine rather than admit that they don't know. In other words, I think that it would be a damned fine thing to conduct a department of metallurgy. Steel, iron, bearing metals—all are used by the trade, yet they do not know any of the whys and wherefores of their manufacture. There is nothing so interesting, to my mind, as metallurgy and, while it is a pretty big field, and in many ways is rather technical, I am sure that it can be handled in such a way that none of its value will be lost and at the same time perfectly plain to the readers.

There have been any God's quantity of machines that have been condemned by users and those who have observed them simply because they did not understand that certain things could be expected of the machine and that certain things could not. A series of articles, taking the ore from the ground and taking it on through the various stages and processes that it must go through before it is ready for use, would be pretty interesting. I don't mean that they would be simply little stories or any damned foolishness like that, but real articles which would show what was being done to the stuff to render it fit for commercial use. It would be a rather easy thing to get a competent man to get out those articles, for there are plenty of them in the steel business, and I think that it would be better to get a man who was not mixed up in the automobile business.

'Nother little idea. I personally think that this form of letter heading could be used mighty well in business. Wouldn't it be a lot easier for you if each morning you could go over a stack of mail and be able to tell by just a glance at the top of the page what the whole thing was about? It's about the best thing in the army and I imagine that the fellow who got it up was court-martialled for it.

Did you ever have some one yank a chair out from under you? Feel the same way. Really haven't much to do now only flying a few ships, and about all there is to do is check up and rewind a lot of the tape that has been snarled since the field began, and that is mostly a case of "Let George do it." Thank Heaven that some foresighted guy invented the rank of sergeant.

Drop me a line when the editorial duties slack up a little, and if you happen to meet up with some weak-minded individual who is looking for an ex-Lieut. and wants to make him his heir let me know his name and address so that I can go and twine myself about his neck. Write soon indeed.—Frank J. Hanley, 10 Broad Street, West Point, Mississippi.



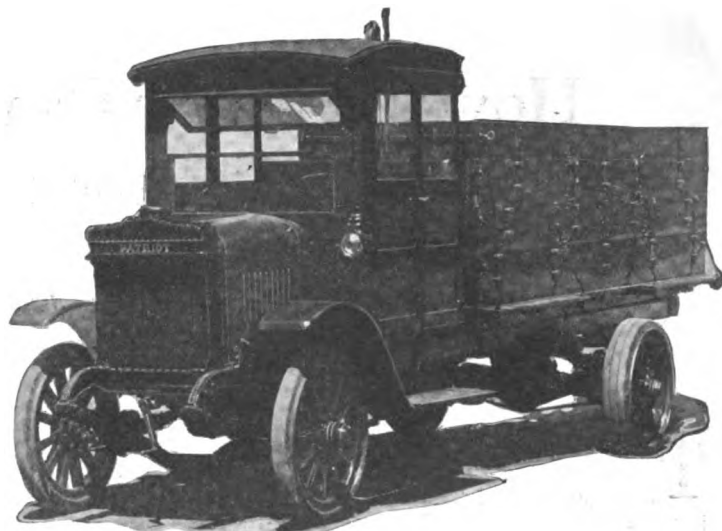
The Tate-Gillham company converted its show window into a huge signboard to stimulate enlistment of mechanics for the Red Cross



# Patriot Trucks

## Made in Two Models

*Both Have Worm Drives to Axle  
and Compound Leverage on  
Brake and Clutch Pedals*



*The Patriot has a distinctive radiator with a large tank.  
The body shown on this model is a dumping grain type*

**P**ATRIOT trucks are being made in two capacities,  $1\frac{1}{2}$  and  $2\frac{1}{2}$  tons, by the Hebb Motors Co., Lincoln, Neb. The smaller model, known as the Lincoln, is \$2,150, the larger, or Washington model, being \$3,150. Some of the important parts are assembled into the truck, and others are built at the Hebb factory. Continental engine, Stromberg carbureter, Bosch magneto and Pierce governor are among the standard parts employed.

The Lincoln model has an internal gear drive axle of Russel make, the Washington using a worm type of Empire manufacture. The Lincoln has a Covert gear and the Washington a Brown-Lipe.

A novelty in construction is the double linkage and bell cranks on the pedals

which give both brake and clutch pedals additional leverage and decrease the amount of foot pressure necessary to throw out the clutch or apply the service brakes.

The radiator is made at the Hebb plant and is designed and built with a large tank to give an unusual quantity of head water for the thermo-syphon system which is used in the smaller model. The radiator is of the vertical fin type with a cast-iron case of distinctive design.

### Parts Easily Accessible

Accessibility of parts and equipment has been carried far in the design of both models and all parts that may need adjustment are quite easy to get at. The gearset is mounted amidships and the control set is mounted flat footed on top of the sub-frame on which the gearset is carried. The pedal assembly is mounted separately on a cross member.

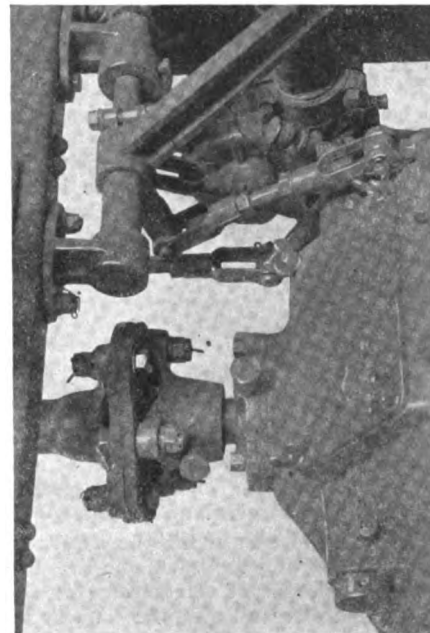
The universal joint is of the fabric type, the flexible member being hard Thermoid material. This joint is placed immediately in the rear of the gearset.

The Continental engine in this model is the N with four cylinders  $3\frac{1}{4}$  x 5 in., cast in block. The gearset has three forward speeds and the Borg & Beck clutch has Raybestos faced dry disks. On direct drive the gear ratio is 7.7:1. Torque and thrust are both taken through the springs, which are semi-elliptic on both the front and the rear. The wheelbase is 135 in. and the tread 56 in.

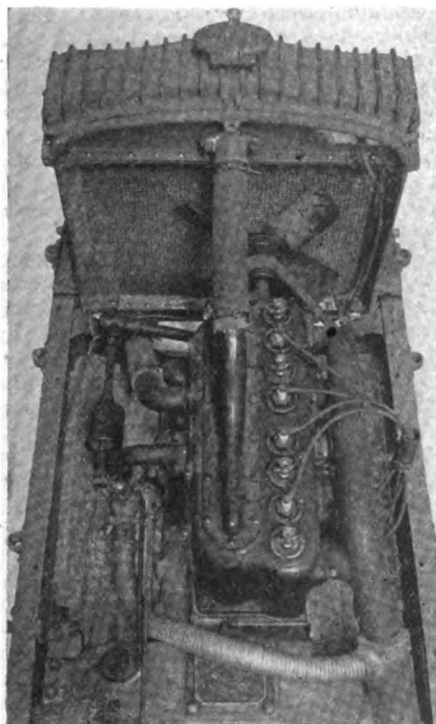
### Washington Model

The chassis and frame are considerably longer on the Washington than on the Lincoln model, the former having a wheelbase of 156 in. The Continental C4 engine has four cylinders  $4\frac{1}{4}$  x  $5\frac{1}{4}$  in., and in this model the water is circulated by a centrifugal pump instead of the thermal system as in the Lincoln. The final gear is 8.75:1 on high gear, and again the thrust and torque are taken through the semi-elliptic springs. The gearset is a Brown-Lipe with four speeds, but the same clutch is used as in the smaller model.

The tires on both models are solid as standard, but pneumatics may be had at an extra price. The Lincoln has 36 x  $4\frac{1}{2}$  front, 36 x 5 rear, while the Washington has 36 x 4 front and 36 x 7 rear. The steering gear is worm and wheel and the brakes internal for the hand and external for the foot.



*A novelty in construction is the compound leverage on the brake and clutch pedals*



*The Continental engine on the Patriot truck is fitted with a governor, which is seen at the left*

### Hold a Show

Send to Motor World as soon as you can the dates on which you will hold your show, so that we may list them in our calendar of Coming Events.

# How the Dealer Can Help Cut Down the Tractor's Idle Time

*Preventable Delay Lessens the Tractor's Efficiency—  
Stop This Delay and Add to Your Profits*

**T**O be profitable to a farmer, a tractor must be working as much of the time as possible. The days for plowing are not so many that a tractor can sit around a week or so waiting for some minor part to be delivered by express from some distributing center or from the factory.

The dealer must carry these parts. And he must not only carry parts for the tractor but for the plows as well. The tractor is of no use without the plows.

There are enough rainy days when the farmer cannot plow in the plowing season without holding him up for repairs.

In one of the States in the East a considerable number of tractors has been purchased, and these are hired around with the operators to different farmers to help them get through their plowing in time and to act as an incentive to farmers to plant ground which they would not attempt to plow with horses. The daily reports from the operators of these tractors show that there were five causes preventing the tractors from working full time. They were:

- 1—Rain.
- 2—Waiting for tractor parts.
- 3—Waiting for plow parts.
- 4—Actually making the repairs.
- 5—Waiting for kerosene.

Some day the scientists may be able to control the rain, but for the present we shall have to grin and bear it.

There is no excuse for the delays incident to waiting for parts for the tractors and plows. If parts were stocked with the dealers all over the country the same as automobile parts have been there would be no trouble from this source. The automobiles which have come into the most general use in the past 5 years owe their popularity largely to the fact that when a breakdown occurred parts or repairs could be secured in the nearest town and one did not have to send half way across the continent for them.

The tractor situation will work out in just the same way. Plowing is more important than riding, and the farmer is already coming to this conclusion. When he starts to plow he must not be held up by any preventable delay. Sending a long distance for parts is a PREVENTABLE DELAY.

The operators' reports in the State

## Things That the Dealer Ought to Stock

### Tractor Parts

Spark Plugs  
Piston Rings  
Ignition Parts  
Carbureter Parts  
Spares to Replace Breakage

### Plow Parts

Points  
Moldboards  
Beams  
Coulters  
Plow Lift Mechanism  
Hitch Pins  
Bolts and Nuts

### Harrow Parts

Disks  
Hitches  
Bolts and Nuts

mentioned showed that in one case a tractor was idle 16 days out of 28 **WAITING FOR PARTS**, 2 days were used up making the repairs and 3 days it rained. So the effective work of that tractor was **ONLY 7 DAYS OUT OF 28**.

### Lack of Repair Parts Reflects on Tractor's Reputation

If the parts had been close at hand the effective work would have been nearer 22 days instead of 7. This is a very extreme case, but it shows how far the thing can be carried to the disgust of the owner. The things needed in this case were simple ones and were in no way the fault of the tractor, and yet the reputation of this tractor suffered very badly.

In an average field many stones will be turned up. Some of these may be buried deep and may be big enough to hook over the point of the plow or break it off. There is hardly a tractor working in stony ground which will not need from 2 to 12 new points in a week. Of course it is up to the operator to carry extra points to provide for this, but the dealer must most certainly carry a stock of these points. A plow won't work without points and the lack of this small article may tie the whole works up.

In very stony ground moldboards are often damaged and a stock of these seems to be necessary. Then nuts and bolts get lost because the operator does not keep them tightened up. While the farmer may possibly make his own wooden hitch pins, he would rather buy a supply of them, and this is another thing that the dealer can stock.

If the tractor that the dealer sells uses kerosene he should provide some means for getting the fuel to the tractor owner without loss of time. In a great many small towns, especially in the East, the grocery store is the only place that carries a stock of it. Tank wagons come around occasionally, but they are generally late, and, with the present labor shortage, they cannot be depended upon.

If there is no supply station within reach of the farmer, the dealer should stock kerosene and sell it to the farmer, preferably in barrel lots, as in this way all measuring, loss and spillage will be avoided.

Free service is to be avoided, but a certain service must be rendered to the tractor owner so that he can get the maximum effort from his tractor. Many dealers have started the service to tractors in a serious way, have fitted up service cars for this particular work, and shortly after they get a telephone call the service car is on its way to the farm. This service is charged for and is a source of profit to the agency, and not an overhead expense such as free service would be.

The customer must be given to understand clearly that tractors and plows, like any other pieces of machinery, will occasionally get out of order, especially if they are not well taken care of. Insure service to the buyer, but make him understand that he has to pay for it just the same as he has to pay a veterinarian to care for his sick horses or a blacksmith to repaint his horse-drawn plows.

Good plowing cannot be done with dull points and the dealer ought to have a good emery wheel to sharpen points. Points can be sharpened quite a few times before they are worn out, unless they are bent, in which case it is cheaper to replace them. Any country blacksmith can do this, but it is simple and easy to do and there is no good reason why the dealer should not get all this work for himself. It all adds to the profit.

# The RETAIL NEWS

## New Truck and Tractor Dealers

The Schenck & Ely Co., Red Bank, N. J., has taken on the distribution of the Maxim tractor for the greater part of Monmouth County. The concern was previously representing the Cole, Kissel-Kar and Studebaker for the same territory and still continues these lines.

The Kessler Motor Co., Inc., St. Joseph, Mo., has been appointed distributor by the Four Drive Tractor Co., Inc., for the territory covered by the States of North Dakota, South Dakota, Nebraska, Kansas, Missouri, Oklahoma and Texas. This territory was formerly covered by the K. C. Four-Drive Sales Co.

Smith Bros., Los Angeles, will distribute the Cleveland tractor in southern California.

The Automobile Sales Co., Memphis, Tenn., has contracted to distribute Cleveland tractors.

Freeman & Freeman, Little Rock, Ark., distributors of the Ford car and Fordson tractor, are now located in their new home, a three-story building with a floor space of 50 x 140 ft.

The Dearborn Truck Co., St. Louis, has moved to 3207 Locust Street to get space for the opening of a service shop.

The Martin Motor Truck Co., St. Louis, has moved into specially built quarters at Pine Street and Leffingwell Avenue.

Smith Bros., Los Angeles, have been appointed distributors in southern California for the Cleveland tractors.

The Automobile Sales Co., Memphis, Tenn., has contracted to distribute the Cleveland tractor in that territory.

The Shlear Motor Car Co., Cincinnati, has secured the distribution of the Denby for that city, southern Ohio and adjacent territory in Indiana.

The Modern Corp., Detroit, and its subsidiary companies will be moved into its new ten-story building, 33 to 39 Woodward Avenue, by Jan. 1. This corporation will feature day and night service for Ford cars and Acason trucks, and carry a complete line of parts and accessories. In addition there is a room in the building for the storage of 1000 cars and trucks. A completely equipped repairshop will be in operation at all times. The Detroit Modern Accessories Co., which also occupies part of the new building, is distributor and jobber to the wholesale trade for a number of accessories.

The Parker Motor Truck Co., Milwaukee, has added to its list of dealers the Parker Truck Sales Co. of Chicago and the W. H. Wallingford Co. of Portland, Ore.

The Chicago Pneumatic Tool Co., Chicago, has added the following companies to its list of motor truck dealers: J. L. Baugher, Staunton, Va.; Mundy Motor Car Co., Roanoke, Va.; J. A. Keyser, Washington, Va.

## Developments in Garage and Repairshop

The Neustadt Automobile Supply Co., of St. Louis, has changed its name to the American Automobile & Supply Co. It is the oldest supply house in that city.

The Transient Garage Syndicate, Detroit, has been incorporated with a capitalization of \$50,000 by Timothy Burke, Fred E. Stanton and Thomas Kennedy.

The Cooper-Higgins Sales Co., St. Louis, distributor of the Gates half-sole tire, has moved from 1114 Pine Street to 1909 Locust Street to double the workshop facilities.

The Twelfth Street Tire & Supply Co., Milwaukee, Wis., has been incorporated, with

a capital stock of \$10,000 to deal in tires, supplies and accessories. The incorporators are Aaron Gute, Jacob and Ella Luff.

The Wisconsin Peerless Starter Co., Milwaukee, Wis., has been organized, with an authorized capital stock of \$10,000, to deal in engine starters and other motor car appliances and accessories. The incorporators include E. Van Boo, William O'Connor and Henry Messmer.

Walter Derby, Arkansas City, Kan., has assumed the management of the new Kanotex filling station at the corner of Madison Avenue and Summit Street.

William Wightall, Altoona, Kan., has opened a vulcanizing shop in the rear of the Altoona Garage.

The Miller Oil Co., Iola, Kan., has secured control of the lots east of the John P. Kelly confectionery on Jackson Avenue and will erect a service station.

E. L. Eads, Rochester, Mo., will soon open an automobile accessory shop in Savannah, Mo.

Morris Bros., Memphis, Mo., have opened a battery service station in Memphis.

Joe Hagen, Bartlesville, Okla., has started a vulcanizing plant at the old triple tread plant. It is known as the Hagen Rubber Works.

Lynch & Lynch, Monroe, Wis., have moved their garage and repairshop to the former Schuetze Livery, which has been rebuilt for garage purposes. The Lynch garage has been taken over by the Monroe Sales Co.

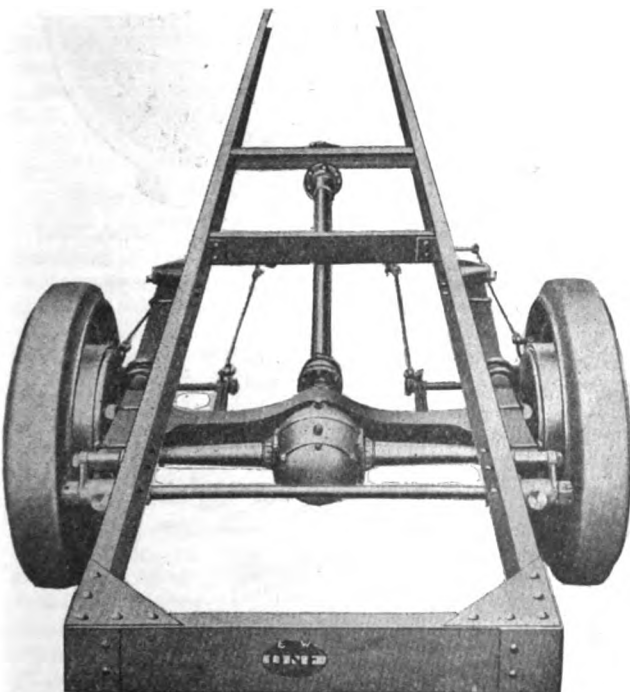
The Clark Motor Co., St. Cloud, in Fond du Lac County, Wisconsin, has disposed of its entire business to E. F. Sippel, formerly connected with the Entringer Garage. Mr. Sippel will deal in passenger and commercial cars and is making a connection with a farm lighting plant manufacturer.

The Willard Service Station, Oklahoma City, Okla., has moved into its new home and is now known as the Oklahoma City Battery Co.

### New Garages

S. Z. Park.....Brownwood, Texas  
A. T. Jackson.....Perry, Okla.  
Bowman Brothers.....Savannah, Mo.

## E. and W. Truck Attachment



THE E. and W. truck attachment is furnished in ten different styles with capacities from 1 to 3 tons in the internal-gear drive models and 2 tons in the worm-drive model. The attachment includes the truck unit, cab and a choice of either express or stake bodies.

The attachment is ready to slip over the frame of the car to be converted. Both side members of the truck frame are straight pieces of channel steel 14 ft. long, 34 in. wide and 5 or 6 in. deep, depending on the capacity. The short propeller shaft is suspended from an extra sub-member in the frame by an adjustable Hyatt roller bearing hanger and has two universal joints, one next to the axle and one at the front end of

the adjustable hanger, into which the cut-off shaft of the car to be converted is fitted.

By means of the straight frame and short propeller shaft with two universals, it is possible to secure any wheelbase up to 180 in. on any type car by cutting the shaft of the old car and regulating the frame of the attachment accordingly.

The attachment for the Ford has a capacity of 1½ tons, and the drive is internal gear, using a Torbensen unit. The tires are solid, 32 x 3½ in.; springs 46 x 2½ in., with ten leaves, and a gear ratio of either 5 1/3:1 or 6½:1. The wheelbase is 128 in.

The price of the unit only is \$450, the prices with cab and body ranging from \$490 to \$560.

Other attachments to fit the Dodge, Overland, Studebaker and other makes of cars list at \$450 to \$700 for the unit alone, the cab and bodies being over and above this figure.

The units, bodies and cabs are made by the E. and W. Mfg. Co., 319-325 Oregon Street, Milwaukee.

# Automotive Equipment

## MERRITT ELECTRIC FOOT WARMER

This foot warmer is an insole to be placed inside of the shoe, the insole having resistance wires imbedded, the ends being attached to plugs which are sunk in the heel. These plugs are connected to the current supply by any convenient arrangement of cords.—Merritt Electric Co., 49 East Twenty-first Street, New York City.

## MOTOR MICA GREASE

This is a grease compounded with Motor Mica, which is a solid material having an action similar to graphite with certain other advantages claimed for it that graphite does not possess. Made in different grades for cups, gearsets, differentials, gear oil, etc. Put up in 1, 5, 10 and 25-lb. pails.—Motor Mica Products Co., 566 Washington Boulevard, Chicago.

## ACME UNIVERSAL COUPLING

This is a universal coupling for magnetos, generators and starters. The coupling consists of three parts, the drive hub, the magneto hub and the center member. Teeth in the hubs fit into slots in the center member, allowing a close adjustment of the timing. On style B the timing can be changed without removing the magneto. Many of the dimensions are standard, but shaft bores, tapers, etc., may be varied to suit individual cases.—Acme Motor Parts Corp., 495 Broadway, Milwaukee.

## SHALER TYPE NPR SHOP VULCANIZER

This is a combination vulcanizer for small shops and is capable of handling about 200 tubes and 12 casings a day. Any type of repair can be handled from tube punctures to casing blowouts. The steam is generated by gas or a gasoline burner and the temperature is controlled by a thermostat which maintains a constant heat. There are three tube bars, an inside-patch vulcanizer and an outside casing form. Price \$70.—C. A. Shaler Co., Waupun, Wis.

## WEAR-PROOF RUNNING BOARD MAT

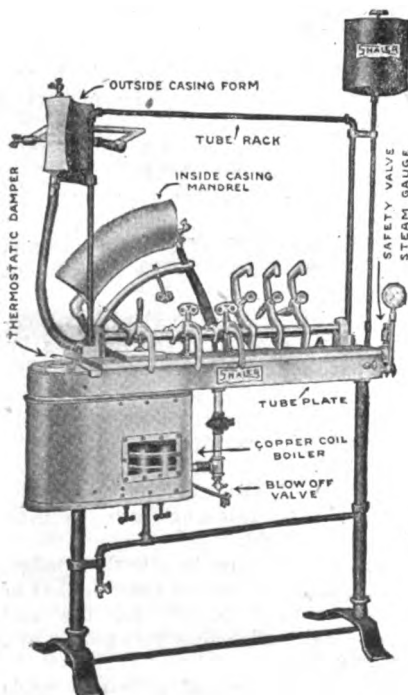
This is a runningboard mat of link construction, 11 in. long by 8 in. wide. Each unit is composed of six pieces of asphalt-treated wool felt set on edge and protected on either side by galvanized steel, presenting a soft, non-slipping surface and a steel link to scrape the shoe free of mud. Price \$1.50.—Wear-Proof Mat Co., 500 South Peoria Street, Chicago.

## BOTTOM-POUR MELTING LADLE

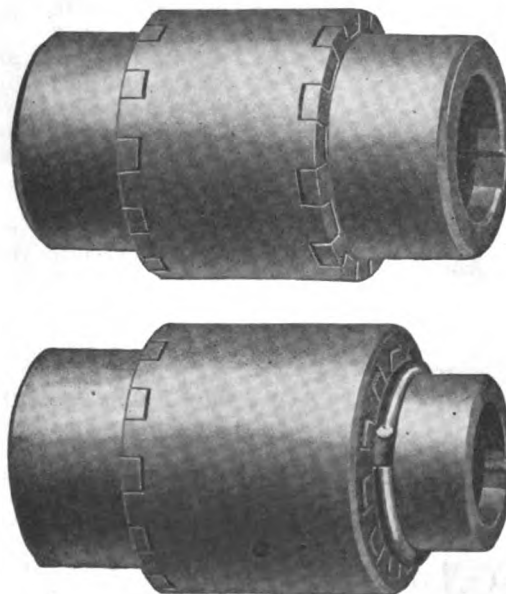
This is a melting ladle for babbitt and other soft metals, the construction being such that the metal is poured off the bottom of the ladle instead of the top, this being accomplished by the internal spout cast into the ladle. This eliminates the necessity of skimming the dross. The bowl is gray iron and the handle Swedes iron with a steel check nut. Made in capacities of 4½ and 9 lb. \$1.50, 18 and 25 lb. \$2, 40 lb. \$2.50.—Joseph T. Ryerson & Son, 30 Church Street, New York City.



Merritt Electric Foot Warmer



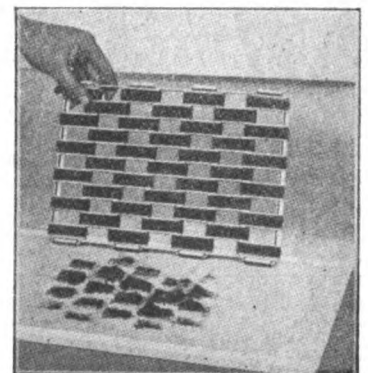
Shaler Shop Vulcanizer



Acme Universal Couplings



Bottom-Pour Ladle



Wear-Proof Mat

## Tractor Demonstrations Likely for Next Year

### National Implement and Vehicle Association Plans to Hold Two, Perhaps Three

CHICAGO, Nov. 22—Although no definite action on 1919 demonstrations was taken other than to refer the matter to the committee for a final report at the spring meeting, it seems probable that the National Implement and Vehicle Association will hold two or three national tractor demonstrations next year and sanction at least two.

The tractor and thresher department of the association closed a 2-day meeting here to-day. E. J. Gittins, chairman of the demonstration committee, spoke strongly in favor of the several demonstrations for next year, and advocated such tests as makers wanted, with the understanding that any maker submitting his tractor to a test would consent to official publication of the results.

Opinions both for and against the continuance of demonstrations were given. The president of the department was authorized to appoint a committee on fairs and tractor shows. Some of the makers and dealers have complained that they did not get a square deal from the managers of certain State fairs. This is expected to relieve matters.

There was a brief discussion of belt speeds, which brought out a division as to whether it was feasible to standardize belt travel. No action was taken; tractor hitches were considered, and a committee was appointed to study the problem and report soon to the executive committee.

Junius F. Cook, Assistant Secretary of Agriculture and in charge of farm equipment control, spoke on "Tractor Education."

Officers were elected as follows: President, J. B. Bartholomew, Avery company; vice-president, G. P. Alexander, Aultman & Taylor; secretary-treasurer, E. C. Merwin, the Russell company.

### Consider Tractor Curtailment

CHICAGO, Nov. 22—B. F. Sprenkle, president of the American Tractor Association, was vested with power to decide upon the advisability of making another visit to Washington in the near future to try to secure still further modification of the restriction rulings of the Priorities Division of the War Industries Board on tractor production, by the executive committee of the association, which held a meeting here to-day. The executive committee endorsed the project of a permanent tractor exposition to occupy the second floor of the Leiter Building, State and Van Buren Streets, Chicago, provided a sufficient number of leases for space can be secured by the exposition company to insure the success of the project. The total rental of the second floor will aggregate in the neighborhood

of \$75,000 a year, and already assurances have been received from so many manufacturers of tractors and tractor parts that the success of the plan appears highly probable, provided the exposition plan as a whole goes through.

The American Tractor Association, while it will be in virtual control of the tractor section of the exposition, will not assume rental liability as an association, but will depend upon individual exhibitors to bear it collectively. A committee, consisting of John W. Foote, of the Foote Bros. Gear & Machinery Co., and Henry Farrington, was appointed to handle the details of the plan.

## General Motors Tractor To Compete With Fordson

NEW YORK, Nov. 25—The General Motors Corp. is shortly to enter the market with a new small farm tractor in a price field to compete with the Fordson. This will be known as the Model M Samson and will sell for \$650. It is to be a 2-3-plow machine designed to pull two 14-in. plows under all conditions and three plows under favorable conditions.

It is understood that this model is to be in addition to the present Samson model, which is somewhat larger and sells for in the neighborhood of \$1,750. The new machine is to be built in the Janesville, Wis., plant which the company recently acquired and which is now being actively placed in condition for production. It is stated that the machine will be sold by the tractor selling division of the General Motors Corp.

### Henry Ford Deserts Ford Motor

DETROIT, Nov. 25—Henry Ford has left the Ford Motor Co. He has formally resigned as head of the company which he conceived and built up to be the greatest motor car producing plant in the world. Hereafter he is to devote his entire time to his tractor interests and to the publication of a new national weekly paper. His place is to be taken by his son Edsall.

### Ohio Jobbers to Meet Dec. 4-5

AKRON, Nov. 25—The annual meeting of the Ohio Automobile Jobbers' Association, which was organized at the last meeting of the Ohio Automobile Trade Association at Columbus in February, will be held in this city December 4 and 5. The meeting was originally scheduled to be held in Columbus but was changed in order to bring both associations together. Many are members of both organizations. The program is being prepared by President H. M. Dine of Canton.

### Ohio Trade to Meet in Akron

COLUMBUS, Nov. 25—The coming annual convention of the Ohio Automobile Trade Association will be held at Akron, Dec. 5 and 6 according to an announcement by Commissioner Moon of Columbus.

## Transport Conference Interests Truck Dealers

### Highway Haulage and Its Problems Discussed by Representative Gatherings in New York

NEW YORK, Nov. 23—This evening marked the closing session of a conference which has attracted a good deal of attention, for the reason that at it the various problems of road transportation of farm products and general goods were dealt with from all points of view by men who have specialized on the subject.

The meetings, seven in all, were held in the Broadway salesroom of the Colt-Stratton Co., attracting large audiences of men interested in the recent development of road transport and even more in its possible development on a national scale. Dealers, truck operators, farmers, prospective truck-service men, truck drivers, government officials and others attended in gratifying numbers and each evening engaged in open discussion at the conclusion of the scheduled address.

Subjects under consideration included: The Motor Vehicle in Rural Express.

Increasing Store Door Delivery by using Trucks.

Inter-City Deliveries.

Highway and Street Improvement.

The Motor Vehicle and the Traffic Problem, etc.

The conference had the active co-operation of a dozen different organizations interested in the promotion of road transportation and several governmental officials lent their support by delivering addresses and answering questions relative to the official attitude on various points.

Dealers were especially interested in the various aspects of the rural express movement and close attention was given to statements made regarding the great development in this direction, involving, as it does, the use of a large number of trucks of all capacities. In this connection the activities of the various Return Loads Bureaus were discussed and also the suggestion that the Post Office was considering the taking over of disused army trucks for the road transport of parcel post and farm products.

Reference was made to the fact that the development of highway transport meant the taking of the so-called "short haul"—transportation over any distance under 50 miles—away from the railroads and it was also stated that in several districts such progress in this direction had been made that the roads were carrying more than 60 per cent of the total amount hauled by the railroads. It was also pointed out that although the saving in time might be considered the main object in using trucks instead of railroads, there was also an appreciable saving in cost where trucks were handled intelligently and full advantage was taken of the facilities for obtaining return pay-loads.

Another point of especial interest to



the dealer was the increased use of trucks which will be rendered necessary as soon as the scheme for store-door delivery goes into effect. It will mean that opportunity will be afforded for the quick sale of many trucks of all load capacities, sales which are held up for the moment waiting for the plans to be completed.

Among the experts who addressed the conference were the Hon. James I. Blaklee, Fourth Assistant Postmaster General; Joseph Husson, editor of *THE COMMERCIAL VEHICLE*; F. W. Fenn, of the Rural Express Committee, N. A. C. C., and others. John R. Eustis had charge of the proceedings.

#### Milwaukee Plans Show

MILWAUKEE, Nov. 25—Milwaukee will hold its annual show as usual. This decision was made at a special meeting of the Milwaukee Automobile Dealers' Association, which instructed its show committee to proceed with arrangements along the lines originally laid out. Tentatively it has been decided to hold the 1919 exposition during the week of Feb. 14 to 20, inclusive. Unless later developments make a change seem advisable or necessary these dates will be adhered to. Frank J. Edwards, head of the Kissel-Kar Co. and Edwards Motor Car Co., Dodge dealer, has been designated as chairman of the show committee. Arrangements are being made with the National association so that Secretary Bart J. Ruddle, who has conducted practically every show held in Milwaukee, will be released for the show period to handle the management. Since the last Milwaukee show was held, Jan. 11 to 17, 1918, the big Auditorium has undergone important changes which are peculiarly advantageous to this display because of the concentration of exhibits made possible.

#### Bituminous Storage Limit Off

WASHINGTON, Nov. 25.—All storage restrictions on bituminous coal were removed to-day by the United States Fuel Administration in conformity to the action of the War Industries Board in cancelling its preferential industries list. Anthracite coal is not affected, however, by the ruling of the Fuel Administration. Every industry and every householder in the country now may store as much bituminous coal as desired or obtainable, as the action of the War Industries Board removes the necessity for the Fuel Administration to distinguish longer among different classes of industrial plants.

#### Eliminate Gasoline Tax

WASHINGTON, Nov. 25.—The gas Senate Finance Committee which is revising the new War Revenue bill has cut out of it the proposed tax of 2 cents a gallon on gasoline.

#### New Joints for Templar

CLEVELAND, Nov. 25.—The Templar Motor Corp. has adopted Thermoid universal joints for use in its latest model.

## Remove Restrictions On Cars and Trucks

### N. A. C. C. Sends Out Announcement—No Official Word From War Industries Board

WASHINGTON, Nov. 25—It seems probable that definite word removing all restrictions on the manufacture of passenger cars and trucks will be forthcoming in the very near future. The National Automobile Chamber of Commerce already has come to this conclusion and has announced in a circular to its members that "after Jan. 1 there will be no limitation of any kind on the manufacture of passenger cars or trucks."

Actually no word of authority has come from the War Industries Board. Charles C. Hanch, chairman of the Automotive Products Section of this board, has officially told manufacturers that their pledges to the board will be canceled after Jan. 1. In view of this fact, and after consultation with Hanch and other members of the Priorities Board, the N. A. C. C. has come to the conclusion that all restrictions are to be lifted Jan. 1.

Rhodes Baker, of the Priorities Board, who has been the official point of contact between this board and the manufacturers, has resigned and left the national capital.

#### Colorado Dealers to Meet

DENVER, Nov. 25—Two events of wide interest to the motor car industry in the Rocky Mountain territory will be the annual convention of the Colorado Garage Association and the Rocky Mountain Auto Trades Association, to be held at Des Moines, N. M., and Pueblo, Colo., respectively, Nov. 25 and Dec. 9 and 10. The garage body has members throughout New Mexico and southern Colorado, and 75 to 100 delegates are expected by President J. Allen Wikoff, of Clayton, N. M. Plans will be made to take back into employment men returning from France and the training camps. The organization will make extra efforts to place every man taken from garages by the draft.

The Pueblo convention is expected to draw hundreds of delegates from Colorado, Wyoming and New Mexico. Highways transport developments and reconstruction activities will have main places on the program, and President Vesper of the National Automobile Dealers' Association will be chief speaker. Plans to expand the association's scope, in respect to both activities and territory, are also expected by Secretary Harrison Goldsmith of Denver. Both he and President F. C. Farquharson (Trinidad) will attend the New Mexico meeting also.

#### For National Road Program

KANSAS CITY, Nov. 25.—A National Highway System, as a permanent memorial of the part our boys—and girls—

took in the world war—the Government spending as much money on it as it has spent on the railroads.

State, county and local highways, as specific permanent memorials to the man-contribution of these sub-divisions to the war.

A League of Highway Associations, to push this project.

This is the suggestion of Frank A. Davis, secretary of two transcontinental highway associations, the National Old Trails and the King of Trails. He has sent a statement of his conception of this memorial plan to the officials of twenty-five of the organized and working road associations. He has also sent personal letters asking that they have official representatives present at the Highways Industries Association convention in Chicago to discuss and if possible put into effect the organization outlined.

#### Texas Could Use 50,000 Tractors

FORT WORTH, Nov. 25—Although the lands of Texas, particularly the level prairie country of the western portion of the State, are specially adapted to the most economic and satisfactory use of the farm tractor in plowing and other farm work there are at this time only 4144 tractors in use upon Texas farms, according to statistics just compiled by the Chamber of Commerce of Fort Worth.

These figures show that there is an average of one tractor to every 30,000 acres of farm land and one tractor to every 102 farms. Sixty-seven Texas counties are without a single tractor and 100 counties have less than 10 each, while only 27 counties in the State have 50 or more tractors.

It is reliably estimated that Texas has only 5 per cent of the necessary number of farm tractors, and it is generally conceded that there is an immediate demand in this State for 50,000 of these machines. To purchase this number will require a minimum investment of \$50,000,000.

#### Dealers and Buyers Holding Off

BOSTON, Nov. 23—Motor sales in Boston showed a tendency to slump a bit following the declaration that the ban would be lifted on the production of motor cars. A number of the dealers report that prospective buyers are holding off because they look for a drop in prices in the spring or before that time. Even some of the sub-dealers are refusing now to take cars from distributors because they want to be protected against a drop in price, and this assurance the dealers cannot give. The fact that one big company has announced a \$300 cut, and another is expected to make a similar announcement about December 1 has led buyers and some dealers to expect this reduction will be general. Until a few of the other big dealers come out and state that present prices will hold good for some time there will be a fluctuation in sales, caused by the uncertainty.

# *The Big Truck Problem Is* **To Sell, Not to Produce**

**Truck Sales Managers Are Told the Job of  
Merchandising Is the Real Big Job To-day**

BUFFALO, Nov. 21.—A meeting of the National Association of Motor Truck Sales Managers was held at the Hotel Lafayette, Buffalo, N. Y., Nov. 15 and 16, and in his opening address of welcome to the members T. R. Lippard, president of the Stewart Motor Corp., spoke convincingly on the importance of the sales managers of each manufacturing concern and the necessity for a well-defined policy governing their operation.

With the ceasing of hostilities of the great war and the opening up of the commercial field, the problem now confronting the truck manufacturer, Lippard said, was one of merchandising the product rather than one of manufacture. There was no question as to the utility of the truck in so many known channels as well as the development of the use of the truck in new channels. In the sale of a truck suitable for the purpose and through a dealer who could maintain by service the continuous operation of such a truck, each sales manager should realize that he has a man-sized job.

Lippard further emphasized that by better business methods, uniform products, maintenance of prices, and careful accounting, it would be possible for the truck dealer to make profits on his business where heretofore through lack of such attention or policy he has perhaps suffered.

Speaking for the Stewart Motor Corp., he assured the members present that he appreciated that prospective purchasers might look for a lowering of prices with peace conditions now applying, but as prices were based upon the cost of labor and materials, and as there had been no indication that there would be a lowering of such items, he expected to maintain his present prices for a year, at least, with the possibility that they might be forced to increase their list.

Several new members were elected, including representatives of the Packard, Pierce-Arrow, Rowe and Maccar companies.

E. T. Herbig, of the Service Motor Truck Co., read a paper on the necessity for legislation in connection with better roads.

In the afternoon session L. E. McLaughlin, of the King Trailer Co., and R. C. Sykes, of the Troy Wagon Works, both manufacturers of trailers, addressed the meeting on the subject of trailers, what they accomplish and how better co-operation between truck manufacturer and trailer manufacturer would develop a larger use of both products.

On Friday evening the association held a banquet at the Hotel Lafayette, at

which time George C. Diehl, Erie County Engineer, who was the principal speaker, spoke at considerable length on the subject of roads, calling attention to the fact that manufacturers of motor trucks had an organization through their dealer connections throughout the country whereby legislation both national and local could be obtained by using such an organization to its fullest extent.

He said that he had found that taxpayers very seldom objected to the initial cost of good roads in any section, but that if it became necessary to rebuild these roads every few years owing to the increased amount of tonnage hauled over them, the taxpayers became very critical.

Consequently, he would urge that truck manufacturers and the dealers who represent them furnish the engineers with

the maximum weights to be carried on any one vehicle, with the maximum size of wheel and width of tire, as well as weight per wheel, and in turn the engineer could then plan and recommend a road which would last an unlimited length of time.

The expense and plan of such a road would be incorporated in the necessary bill authorizing the building of such a road and would not only pass as readily as the ordinary legislation but could be held up as an example of building roads properly.

Diehl was followed by Chester R. Illig, president of the Erie Service Co., which has operated a fleet of trucks between Buffalo and Rochester for some time. Illig gave many interesting facts as to his organization and the successful operation of trucks in such service which could be applied in many other cases.

The meeting closed the following day, when F. J. Pardee, of the Diamond T Motor Truck Co., spoke upon the responsibility of the truck manufacturer under each sale.

Although a positive date was not set for the next meeting, it was expected it would be held in Cincinnati some time in January.

## *Ohio Can Use 100,000 Tractors*

**That Is the Potential Demand, According to the Department of  
Agricultural Engineering**

COLUMBUS, Nov. 21—Twenty thousand 3-bottom tractors and 80,000 2-bottom tractors is the potential demand of the state of Ohio alone, Prof. H. C. Ramsower of the Department of Agricultural Engineering, State University of Ohio, told the implement dealers of the state, who closed their third annual convention here to-day. As, according to the professor, there are only about 5000 tractors now owned in the state the extent of the tractor demand which the dealers may look for in the future is apparent. This surprising statement came practically at the close of the convention, and started the dealers homeward with something to think about.

The convention devoted almost the entire time of its day sessions to a discussion of tractors, tractor service, repairs, power farming equipment, and kindred topics. In fact, the tractor and its trade possibilities were the outstanding features of the convention. This was in marked contrast to the indifference toward the same subjects displayed by a similar gathering of dealers at Omaha last week.

W. H. Stackhouse, Springfield, Ohio, general manager of French & Hecht, manufacturers of metal wheels for agricultural implements, and a member of the Farm Implements Committee of the N. I. V. A., told the dealers emphatically that reductions from present price

levels on all kinds of farm operative equipment could not come to pass until after substantial reductions in the price of materials, transportation and labor had been experienced. No immediate relief on any of these factors was in sight, and prices must remain at their present level indefinitely. For this reason dealers might buy their requirements in the comfortable assurance that they would not suffer loss through price slumps.

During the period of the war the cost of everything entering into the production of farm operative equipment had advanced from 100 per cent to 300 per cent. The corresponding advance in the price of the finished product to the dealer had averaged only from 100 per cent to 108 per cent. The \$5 concession on steel bars secured by the Farm Implements Committee early in the fall had enabled the manufacturers to make 99 contracts without further advance of prices. To do this, however, the manufacturers had been compelled to absorb advances in the cost of materials, transportation charges and labor costs to an amount which aggregated \$34,000,000. Until manufacturing costs fall to an extent which will wipe out this burden the manufacturers now are carrying, prices to the dealers cannot be reduced.

Stackhouse said the problems presented by reconstruction are more serious even than those brought on by war condi-

tions. One of these is the vastly increased demand for food products, and in meeting this demand the agricultural implement men of the country have a vast and important task confronting them. Owing to this enhanced demand for food the demand for agricultural implements will be insistent for an indefinite time to come, and from the point of view of the manufacturer the domestic and foreign demand for farm operative equipment must approximate in volume and importance.

The speaker said that already vast quantities of materials had been released by the cancellation of war orders, and that in his opinion all restrictions would be removed from the manufacture of farm equipment within the very near future.

#### A Conundrum—Not a Question

Tractors scored their innings when the question box was opened. The first question was: If it is necessary and expected of him that the dealer shall maintain the equipment for and that he shall give the service required on the tractors he sells, how many tractors will he have to sell at the prevalent commission discounts of from 13 per cent to 20 per cent to break even?

One of the dealers said this was not a question, but a conundrum.

The second question was: What do you think about free service on tractors?

These precipitated a discussion which lasted throughout the remainder of the afternoon session. Quite characteristically—coming from a convention of implement men—a dealer accounted one of the best and most successful of the implement dealers of the state, but who never as yet has been able to convince himself that the tractor business is worth much of an effort on his part, said that "a serious problem confronts the implement trade by the motor-car dealers who are breaking into the ranks of the implement trade by means of the tractor."

It is much to this dealer's credit that he has the acumen to recognize the condition which confronts the old-time retail implement dealer, even if he himself has hitherto done nothing much to protect his chosen class against the more aggressive tactics of the motor-car dealer.

#### Some Free Service Necessary

The consensus of opinion was that a certain amount of free service is required in the selling of tractors. The farmer, as a rule, requires instruction in the operation of a tractor, and this instruction the dealer is required to give free of charge. A wide difference of opinion, or rather a difference in custom, appears to prevail as to how long a period should be devoted to instruction.

Those best qualified to express a definite opinion, an opinion based upon their experience in the trade, say the determining factor in a majority of instances is the age of the tractor buyer. Young farmers catch on very quickly, and usually become fair operators after a day or two. The older men are much slower to acquire facility in the operation of their machine.

A dealer gave one instance of spending 7 days before it was safe to leave the tractor to the care of its 54-year-old owner. One of the most experienced of the tractor dealers at the convention, who actually has sold over 60 machines, says he figures it necessary to devote about 2 days' time to preliminary instruction.

An approximate estimate of the cost to the dealer of the free service he feels called upon to give, figures out in the neighborhood of \$25 per tractor. After this amount of service has been given it is becoming generally customary to make a charge. It is asserted that charging for service cuts down materially the calls made upon the dealer for assistance. When the farmer finds out he is expected to pay for services he speedily discovers that he can do himself many of the things which otherwise he would call upon the dealer for.

In one instance a farmer insisted, as a condition upon his buying at all, that the service men should be at his beck and call for 30 days. However, when he was told that he would have to pay for all time after the first day, he found that he got along very well with 1 day's instruction.

Charges for service customary among Ohio dealers run all the way from 60 cents to \$1 an hour, depending upon circumstances. Figured on a percentage basis, dealers say the service on tractors runs below that which they have given in the past on binders and other farm equipment.

#### The Question of Commission

On the matter of commissions the impression prevails generally in the implement trade that they are too low, and this is given as one of the reasons why more retail implement dealers have not shown enthusiasm over the tractor trade. It is significant that more complaint on this score is registered by dealers who have not yet sold, nor do they expect to sell, many tractors. The dealer who has made a success of the business appears to be measurably satisfied with present conditions, and, as one Ohio dealer expressed it, "make volume sales solve the commission problem." In this connection, A. H. Billstein, secretary The Arbuckle-Ryan Co., power equipment distributors at Toledo, Ohio, says the motor-car dealer is far more insistent for a better commission than is the retail implement dealer.

Strenuous protest was registered against the custom of tractor manufacturers in sending repairs C. O. D. The objection does not appear to be directed so much against the custom itself as against some of the alleged abuses for which it is held accountable. The rule is that all tractor repairs of whatsoever nature are shipped C. O. D. to the dealer by a majority of the tractor manufacturers. In turn, the dealer is supposed to receive credit for parts which are defective upon return by him of such parts to the manufacturer. So far there is no serious objection.

Prof. H. C. Ramsower of the Ohio

State University talked to the dealers in a practical sort of way about the possibilities of the tractor and power farm equipment trade. Taking Ohio farms as they are to-day, the professor saw a potential demand for at least 20,000 if the economical unit of farm power should be limited to the 3-bottom machine, but a total potential demand for 100,000 tractors if the 2-bottom machine be taken as the economical unit of farm power. As there are now only about 5000 tractors of all kinds owned in Ohio, the future possibilities of the trade are apparent. The professor named the 160-acre farm, with 120 crop acres, as the economic minimum for the 3-bottom tractor, but said farms as small as 80 acres could, with the right kind of management, economically employ a 2-bottom machine. On the average Ohio farm of 160 acres the tractor should displace at least 2 horses, bringing the necessary horse equipment down from 6 to 4 horses, with a minimum of 3 horses.

The tractor will, however, justify itself on the average farm, whether it displaces any horses or not. This is something the farmer does not realize as yet, and an immense amount of educational work remains to be done to bring him to a realization of the advantages and possibilities of power farming.

The professor said that ideas are crystallizing around the type and size of tractor which is best fitted for Ohio conditions. The tendency at present is to adopt a tractor which is midway between the large and the small. Specifically expressed, this means a tractor with a rating of 10 hp. on the drawbar and at least 20 hp. on the belt, the latter rating being demanded by the type and kind of belt power machinery customarily owned by Ohio farmers.

In conclusion the professor said that it was impossible legitimately to compare the cost of farming with horses with the cost of farming with a tractor, because there are no common factors. He also commended community co-operation in the ownership of belt power machinery and tractors, and said he could see tractors used economically on 100-acre farms in communities where co-operation prevailed.

In furtherance of the co-operative idea of ownership, A. H. Billstein of the Arbuckle-Ryan Co., Toledo, called the attention of the dealers to the possibilities of the trade on belt power farm equipment. He instanced in particular the small grain separator.

The attendance at the convention was disappointing as regards number of dealers present, but those there were representative of the best element in the implement trade in Ohio. Officers for the ensuing year were selected as follows:

President—S. M. Sellers.

First Vice-President—C. A. White.

Second Vice-President—E. H. Huffman.

Third Vice-President—H. C. Otterbacher.

Treasurer—M. J. Shank.

Directors for three years—Charles Martens and Will Fisher.

# Back to Business

## *Dealers Getting Ready to Start Right*

LOS ANGELES, Nov. 25—Quick return to normal business conditions here is predicted by the automotive dealers. Already the signing of the armistice has had its effect in more liberal buying of new cars and trucks and the number of "lookers" has increased perceptibly. Although Victory Day was observed as a holiday and all the dealers closed their places of business to join in the celebration a number of sales were made. Some of the dealers reported sales to buyers who were not even regarded as prospects and whose identity was entirely unknown.

A rapid decline in prices of used cars is almost certain to follow. Several used-car dealers who laid in a heavy stock of cars bought on a rising market under the expectation that the war would continue indefinitely and there would be no more manufacture of new cars after the first of the year will have to assume a heavy loss. Owners who have had cars for a year or more and have been trying to sell them on the strength of the present high prices of new cars and thereby make quite a profit are now finding their cars unsalable at any but a reasonable figure.

### Map Business Campaign

BOSTON, Nov. 25—When the big news came of the armistice and the motor dealers were rejoicing Al H. Sowers, of the Cleveland tractor and Fulton truck, called a meeting of his sales force and mapped out a plan of campaign to go after the big business. He asked his men what organizations they belonged to, telling them to look up the members to see if they were business men.

One of the men laughingly said he was only a "Granger." "Fine," said Sowers. "When do they have their next meeting? See if you cannot arrange it so that I can go there and talk to them about tractors." And the salesman saw the possibility of it, and he is going to have Sowers as a guest when his Grange meets, and the members will get some points about tractors that will be new to them. And Sowers may get some orders.

### Planning BUY NOW Campaign

BOSTON, Nov. 25—Some of the Boston dealers are planning to start a campaign to educate the people to "BUY NOW." Following the story in the papers about lifting the ban, some of the sub-dealers in New England and a few of the prospects that have been considering buying cars have reached the conclusion that there will be plenty of

cars next spring and the prices will take a drop.

Therefore the dealers who have on hand some cars now that they want to sell so that they can get their money back for another turnover feel it is a good time to tell the people about future conditions. And they are figuring on advertising the fact that to delay purchasing or ordering motor cars will mean a chance of not being able to get a machine when they want it in the spring.

### Hartford on the Job

HARTFORD, Nov. 25—Hartford dealers are facing a new era. Satisfaction reigns supreme to-day. Everybody is feeling decidedly improved. Those who saw through blue glasses now see things in the right light and the slogan to-day is "On with the show!"

This week when news was received that the war board was going to permit manufacturers to get back to a 75 per cent production basis, joy was actually unconfined.

Broad smiles were seen up and down the row. And then again when announcement was made that the ban was off motor car exhibitions the various dealers gave vent to their enthusiasm.

As a result of all this a meeting of the Hartford Automobile Dealers' Association is to be held Monday evening to discuss among other things the advisability of holding a show. Some of the more conservative members are inclined to the belief that a show would not be advisable. However, this much remains, if the majority of the dealers when they meet Monday evening decide to have a show there is the end of the matter. The show will be held. And of course Hartford's show season comes at the tail end of the winter and winter has not set in as yet. So everyone is hoping.

Russell P. Taber favors a show. Regarding the proposition he said: "This news that manufacturers could return to a 75 per cent production basis is really encouraging. We have been on a 100 per cent truck basis here for some time. We reorganized our various departments to meet war needs and we learned a little more about how to save a dollar. This hue and cry that business has been bad is really amusing. The town was full of business and still is, if one wants to get a hustle on and corral some of it. There is a big chance for all of us. Why, during this war period with restrictions on certain lines of trade considered essential to the successful prosecution of the war and all that sort of thing, business has been good. We never sold so many trucks

before. We thought we knew all about the sale of trucks, but we have learned something. I think a show will be a great help and I shall advocate that one be held as usual. Let's all get down to business and follow the admonition of the president, "Business as usual."

A. C. Hine, head of the A. C. Hine Co., Cole and Oakland distributor, said: "Now that peace is in sight things are brightening up. I quite agree with Mr. Taber when he says that the past week has marked a radical change in the situation. We have done comfortably well this autumn and now that there is a good chance of our getting cars through I don't see as there is anything to worry about. Certainly we need a show, more than ever. We will be there."

A. C. Rose of the automobile department of Brown, Thomson & Co., Cadillac distributor, said: "Much has been said about a lack of business. We have sold all the eights we could get and will continue to do so, of that I am most certain. In my opinion we need a show this season and of course if there is one, which seems very sure as a matter of fact, why we will be there stronger than ever."

William M. Turnbull, manager of the Colonial Automobile Co., Studebaker distributor, said: "Naturally all automobile dealers are glad to know that peace is on the way. We are very much elated that it is. Now we can get right down to business and sell our cars as fast as we can get them. It may seem like a paradox, but nevertheless October was the best month we have had since we began business a few years ago. I am for the show, strong."

### Dealers to Watch Sale of Government Vehicles

BOSTON, Nov. 25—Boston motor dealers are wondering just what the effect will be if the Federal Government decides to do the same thing with its motor cars and trucks that it proposes to do with its auxiliary patrol fleet. The Navy Department is going to have a clean-up sale of boats shortly.

If the same thing follows with trucks and cars there will be a big sale of them in New England. In Massachusetts there are hundreds of motor cars used by army and navy officers, by officials of the Shipping Board, and a dozen and one different committees making headquarters in Boston.

Carrying supplies from Boston to Camp Devens and to all the naval stations and other places of government activity are hundreds of motor trucks. To dump all these cars and commercial vehicles on the market might cause a slump in prices. At any rate the dealers are watching the situation now to see how it develops.

If the Government asks for sealed bids for individual cars and trucks some of the used-car men may decide to buy a lot of them. And Government contractors would also be heard from. Navy and Army officers, who have been riding around in the cars, as well as civilian appointees, knowing just what condition

the cars are in, may bid them in for their personal use, it is believed. However, it is a problem that the dealers are going to watch carefully and meet conditions.

#### Milwaukee on Its Toes

MILWAUKEE, WIS., Nov. 25—While the kaleidoscopic rapidity of developments following the end of the war has left most persons in more or less of a daze, the motor car trade has been quick to conform itself to the new order of things as it is being unfolded before them. With the sole exception of the news of the signing of the armistice on Nov. 11, nothing has been greeted with so much joy and exultation as the announcement that the curtailment of motor car manufacture already has been relieved, with every indication that restrictions will be further moderated within a short time.

It is now considered certain that the Milwaukee Automobile Dealers' Association will hold its annual winter show in the Auditorium in January. A meeting will be held within a few days to take definite action. Several months ago it was virtually agreed to abandon the exposition in deference to the wishes of the federal authorities. However, the matter was left in a status which now makes it a simple and easy matter to restore the show schedule without interruption.

#### Wing Already Expanding

BOSTON, Nov. 25—Frank E. Wing, distributor of the Marmon car and Hurlburt truck, had such great faith that the United States forces would win a quick victory that, while other dealers were retrenching here, he began to expand. Now he is ready for the future, and is a step in advance of some of his fellow dealers.

Some months ago he figured out that if the war did end it would be worth while being in a decent building to handle his double line. He had a big structure on Commonwealth Avenue that would have been sufficient for war times. But he heard that the big four-story structure at the entrance to the Fenway, built for the LaLime & Partridge Co., was in the market—and he leased it right away.

It meant several thousand dollars more a year rent, and greater expense in heating, lighting, etc. He made a calculation and figured that he could afford to lose a few thousand dollars annually for a couple of years on a chance that the war would end earlier. A week after he leased the building he could have leased it over at an increased rental, but he decided to move in. He got all settled just when the armistice came, and right away he was ready for new conditions, looking for additional men.

Some of the other dealers attribute it to "Wing luck," but it is merely figuring business on a basis of what it may be a year ahead and being ready for it. John D. Murphy, for some years with the Noyes-Buick Co., has joined his sales force to sell Hurlburt trucks.

## Kansas City Plans to Overthrow "Lethargy"

### Dealers Probably Have Enough Cars But Are Wide-awake to Their Selling Problems

KANSAS CITY, Nov. 25—"The war period is not over. The fighting has stopped, but reconstruction will make the next year or so as full of problems as the past four years have been. The two definite facts that we can count on now that we couldn't count on Nov. 10 are: We will get a fair supply of cars next year, and the public will be in a position financially to buy."

This is the consensus of opinion of motor car dealers in Kansas City on the effects of the armistice. Some of them have already, in the first week of no fighting, noted a marked increase in good prospects. Others declare that the industry is now where it was four years ago with reference to the public—that the educational work of the past four years will have to be done all over again, to get the public started to buying.

Several men in the business estimate that stocks of cars—used and new—are probably equal, in this territory, to the probable natural demand for the next few months. They say that in these few months it will be no easier—and no harder—to move cars than it has been for six months past. One Kansas City dealer held a sale of used cars during the Liberty Loan drive, while the influenza epidemic was on; he sold 12 high-priced used cars under the most adverse conditions. He figures that it would be only slightly easier to hold such a sale now.

#### Dealers Planning to Stimulate Trade

Aggressive dealers in the territory—those who have made money in the past—are planning to make special efforts to overcome the lethargy of the public, to get business going on a scale commensurate with the probable supplies of cars available next summer.

"I do not believe that the trade can expect the public to rush in to buy cars, now that the fighting has ended," said R. C. Greenlease, president of the Greenlease Motor Co., and president of the Kansas City Motor Car Dealers' Association. "We will have to convince the public all over again of the utility of the passenger car. While a certain proportion of the natural demand developing in the past year or so has been taken care of with new cars, and with the used cars of officers going into war service, we must remember that there has been no cumulative demand, such as would have been developed had aggressive advertising and sales promotion been continued for the past year. There must have been, it seems to me, a slump, therefore, in the popular desire to own cars, which must now be overcome. People who were good prospects have got along

without cars—because they couldn't get what they wanted, because they didn't want to put out the money while war was on, and for many other obvious reasons connected with conservation programs and ideas. These people will have to be got, again, into the notion of buying cars. There is need for individual aggressive advertising and sales effort, and perhaps for co-operative effort on the part of the industry."

#### Engineers to Meet Jan. 12-14

NEW YORK, Nov. 25—The Society of Automotive Engineers' winter meeting has been definitely placed on the calendar for Jan. 12-14, and is to be held in the auditorium of the Engineering Societies Building, New York. The "Carry Through Meeting" will be brought to a close with a "victory dinner," which is to be held at the Hotel Astor. The meeting will be almost entirely devoted to war and post-war matters, and it is expected that the program of speakers will be of unparalleled interest because of the great events which have been taking place and because a number of men usually diffident about appearing in public have consented to address the sessions.

#### Los Angeles Wants Fuel Standard

LOS ANGELES, Nov. 25—Restriction upon the sale of gasoline after 6 o'clock in the evening and before the same hour in the morning that has obtained here for some months as a conservation measure was removed yesterday. Immediately motorists began an agitation for the restoration of a fuel standard. Before conservation became a national cry this city had the highest gasoline test requirements in the country, and not only was cheap fuel enjoyed but it was unusually high grade. Since the lifting of the ban dealers have been selling all kinds of mixtures under the guise of gasoline, and there has been no preventive measure. The result has been that when "gasoline" was bought at whatever price it was seen fit to charge the purchaser had no protection against mixtures.

A large amount of motor trouble naturally developed that was traced to the fuel, but there was no relief. Now the attention of city authorities has been directed to the change in circumstances and a return to "undiluted" gasoline is being demanded.

#### Cancel All Priorities

WASHINGTON, Nov. 25—Passenger car, truck and motorcycle makers can now go into the open market and purchase materials and supplies at will, and the makers of steel and other necessary automotive materials can supply these in any quantities and to any purchasers as a result of the cancellation of all outstanding priority ratings and the preference list by the Priorities Division of the War Industries Board.



## Dealers Can Collect Tax on "Leased" Cars

### Senate Finance Committee Revises Schedule—Returned Cars Called "Used"

WASHINGTON, Nov. 21—The Senate Finance Committee has included a provision in the Revenue Bill allowing dealers to collect the floor tax on cars which are first leased and later sold.

A ruling has also been made that in the case where a car is leased and is returned by the prospective purchaser without the closing of the sale, the car can be considered second-hand and the floor tax will not apply upon its sale at a later time.

This ruling and the provision are the result of work by the National Automobile Chamber of Commerce. Many dealers in this country, and particularly those in the West, sell cars on what is known as the leasing plan whereby a prospective purchaser leases an automobile by the month, paying monthly rentals, and at the expiration of 10 months owns the car.

The provisions of the first Revenue Bill, which included a 1½ per cent floor tax, aroused the question as to whether the dealer or the renter owned the car, and further, the dealers objected to paying the tax on the car which had been returned by the renter, stating that this was being sold as a second-hand vehicle.

The ruling definitely decided that the dealer was always the owner of the car until the title passed into the hands of the renter, but, the new amendment provides, the dealer can charge the renter with the price of the floor tax when he takes title to the machine. If the car is returned by the renter prior to the 10 months it is classed as a second-hand vehicle and taxes do not apply to it.

### Good Roads Invaluable

WASHINGTON, Nov. 25—That good roads will be invaluable to the soldiers who will return from the Army and who will be provided with farm land by the Department of Interior was the statement made in Congress by Congressman H. Z. Osborne yesterday in a general discussion of the Governmental provision for returning soldiers and sailors.

The Congressman pointed out that following the Civil War, contrary to the general pessimistic expectations, industry and agriculture both developed and expanded. At that time when the country had a population of 31,000,000 inhabitants the 2,000,000 soldiers who were mustered out found immediate employment.

Consequently it is expected that today with the population of 110,000,000, the mustering out of 3,500,000 soldiers will have no evil effect either upon industry or general labor conditions.

Franklin K. Lane, Secretary of the Department of the Interior, in a letter to Congressmen Osborne stated that the ex-

perience of wars prove that soldiers as a rule seek outdoor life following the wars and that this country has 230,657,755 acres of unappropriated land of which one-half is exceedingly cultivable.

It is planned to ask for legislation which will allow for the cultivation of this land by the soldiers who desire to till the soil, and in hand with this project comes the importance of sufficient farm tractors and good roads to allow for transportation by motor truck and passenger car. Consequently, said Congressman Osborn, there must be immediate legislation for provision of vast improvement and increase of transportation facilities, "especially the creation of a national system of good roads."

### Wages Increase; Workers Decrease

WASHINGTON, Nov. 25—Reports by automobile manufacturers to the Department of Labor show a continuation in wage increases and decreases in the number of workers employed. In July, 1918, 48 automobile makers employed 128,473 workers with total pay rolls of \$3,243,692 as compared with 127,962 workers at \$2,810,608 in July, 1917. In this instance the number of workers increased .04 per cent while wages increased 15.4 per cent.

In July, 1918, 47 makers employed 113,449 workers at \$2,939,563 as compared with 118,007 workers at \$3,021,209 in June, 1918. Here there is a decrease of workers of 3.9 per cent and a decrease of wages of 2.7 per cent. A continuing decrease in the number of workers is shown by the fact that on July 31, 1918, 28 makers employed 80,290 workers as compared with 83,374 workers in 1917 and on July 31, 1918, 27 automobile manufacturers reported 67,409 employees as against 71,391 on June 30, 1918.

Two plants reported wage increases of 10 per cent, effecting 15 per cent of the employees in one plant and 50 per cent of the organization in the other. Another concern granted 10 per cent increases in some departments. The minimum wage in one plant was increased from 43 cents to 50 cents per hour. Another establishment allowed the entire organization the hourly rates overtime over 8 hours instead of 9 hours.

### Highways Industries Meeting Dec. 9-13

CHICAGO, Nov. 25—The date of the convention of the Highway Industries Association has been changed to Dec. 9-13. This was found necessary because of conflict with the meeting of the War Service Committee of the United States Chamber of Commerce which is scheduled for Atlantic City, Dec. 4, 5 and 6. Under the new program the joint road meeting will be held Dec. 11 and 12. On the 9th and 10th of December there will be held executive sessions of state and highway officials. On the 13th there will be an executive session of the state highway officials and in the afternoon a meeting of the Highway Industries Association.

## Jobber Salesmen Must Really Help Dealers

### Big Job Not to Sell Merchandise But to Assist Trade to Get It Off the Shelves

OMAHA, Nov. 21—"Men, selling the dealer is not the important point; rather it is showing the dealer how he can move the tires he buys."

The speaker was S. W. Reese, special representative of the pneumatic tire department of the Firestone Tire & Rubber Co., Akron, Ohio, addressing a district conference of Firestone salesmen at Omaha.

W. B. Alexander, newly appointed manager of the Omaha branch of the company, emphasized the same point of view later during the conference when he said:

"Instead of trying to sell tires which he does not want because of the stock he already has on his shelves the tire company salesman could much better devote an equal amount of time teaching the dealer how to sell tires."

"To put pep into the men and to see that they understand selling thoroughly," and "that the Firestone dealer shall be the best dealer everywhere," is the avowed purpose of the series of district conferences of salesmen which the company now is holding in various parts of the country in lieu of the usual annual conference held at the factory, but which was called off this year for patriotic reasons. Furthermore, it is the intent of the company to show the men to what an extent the co-operation of the company by way of sales suggestions and dealer helps will go toward accomplishing the purpose in hand.

The selling organization of the company for Nebraska, western Iowa, southern South Dakota, Wyoming and Colorado, to the number of about fifty men from the sales forces of the Omaha branch and the Sioux City and Denver depots, gathered at Omaha for this conference.

The home office at Akron, Ohio, is represented by F. K. Starbird, manager the pneumatic tire department; W. R. Cartwright, manager of the truck tire department; P. R. Walker, manager of the tire accessory department, and S. W. Reese, special representative of the pneumatic tire department. The conference is under the direction of W. B. Alexander, who recently was transferred from the manager's chair at Columbus, Ohio, to a similar position here.

The Akron men brought the "Factory to the Boys" in a very tangible and emphatic sort of way. They came out to sell the Firestone organization and the spirit which animates it, and they are putting it across. The men from the Omaha territory who are here will go back to their work with a more comprehensive perception of their functions as salesmen in the scheme of Firestone merchandising, and they will go back to their

territories determined to make the dealer clientele they serve better merchandisers.

An assembly hall in the Rome Hotel was used for a display of Firestone products and dealer helps. In an adjoining room a motion picture machine traced the production of crude rubber from the plantation to the ship. The rubber was followed through the factory and even through the tire service station of the tire repair man.

These accessories, together with the talks of the factory men and Manager Alexander, with a clear exposition of how to use the dealer helps provided by the company, put the story of what the company intends to do for the dealer through its traveling representatives in a more emphatic manner than it would have been possible to achieve in any other way.

The social side of the occasion was well taken care of at a banquet tendered by the company to the men at the Hotel Rome last night.

### Coast War Over Sunday Closing

LOS ANGELES, Nov. 25—A merry little war, all their own, is being waged among the used car dealers here over the question of Sunday closing. As a conservation measure and actuated by the principle they are entitled to one day's rest in seven, about forty dealers have formed an organization and signed an agreement to close their stores on Sunday. Included in this number are almost all of the new car dealers who conduct used car departments separate and apart from their new car business and some of the leading exclusive used car dealers.

Opposing the movement are the "corner lot" merchants, the curbstome brokers and a few dealers who actually are enterprising enough to keep the premises clean and the windows washed. The argument against closing is that many customers do not have any other day than Sunday to inspect cars. New car dealers do not keep open on Sunday and sell cars, nevertheless, so the weakness of this argument is evident. The contention is only another evidence of the difficulty in getting all dealers to unite on any sort of proposition.

### Klaxon Charged With Unfair Methods

WASHINGTON, Nov. 21—The Federal Trade Commission has issued a formal complaint against the Klaxon company, Newark, N. J., declaring that this concern is forcing retailers to maintain standard fixed resale prices on its products. The company is further charged with selling Klaxon horns on the condition, agreement or understanding that dealers shall at all times carry a minimum stock to the value of \$300, and is charged under the Clayton Anti-trust Act with fixing prices, rebates or discounts on the condition that dealers will not handle competitive products. The Klaxon company is cited to appear before the commission in Washington on Dec. 31.

## Avery Tractor Men to Attend Service School

### Will Cover Every Maintenance Feature for Future Instruction of Dealers

PEORIA, ILL., Nov. 25—Beginning Monday, Nov. 4, all Avery service men were sent to the Avery factory to go through a week's course of instruction under the direction of L. R. Van Volkenburg, service engineer of the Avery company. These men are being trained so they can go out and teach more than 600 local dealers' service schools. Sunday afternoon, Nov. 10, they boarded the train for Milwaukee, and spent one day in that plant.

The object of the local dealers' service schools is to reach the farmers who cannot attend the general service schools. For all those who cannot attend either service schools the Avery company offers a correspondence course, which is sent free to anyone who desires to study it. The course covers the following subjects:

- 1—Principles of a tractor engine
- 2—Carbureter, care and adjustment
- 3—Magnet, care and adjustment
- 4—Bearings, adjustment and lubrication
- 5—Valve grinding and timing
- 6—Belt and drawbar transmission systems
- 7—Care and operation of the tractor

The dates for the general branch house service schools are:

Dallas, Tex. ....	Dec. 4-6
Kansas City, Mo. ....	Dec. 9-11
Wichita, Kan. ....	Dec. 12-14
Omaha, Neb. ....	Dec. 16-18
Lincoln, Neb. ....	Dec. 19-21
Madison, Iowa ....	Jan. 9-11
Des Moines, Iowa ....	Jan. 13-15
Sioux Falls, S. D. ....	Jan. 16-18
Aberdeen, S. D. ....	Jan. 20-22
Minneapolis, Minn. ....	Jan. 23-25
Fargo, N. D. ....	Jan. 27-29
Grand Forks, N. D. ....	Jan. 30-Feb. 1
Billings, Mont. ....	Feb. 3-5
Peoria, Ill. ....	Feb. 13-15
Indianapolis, Ind. ....	Feb. 17-19
Columbus, Ohio ....	Feb. 20-22

### Indianapolis Boosts Return Loads

INDIANAPOLIS, Nov. 25—The Indianapolis Automobile Trade Association, in conjunction with the Indianapolis Chamber of Commerce, inaugurated a new plan of booming the return loads proposition last Wednesday, Nov. 13, when eleven crews left Indianapolis and covered eleven different routes preaching return loads in the towns situated along the routes. Each crew consisted of four men, one to deliver lectures, one to make a survey of road conditions for the highway commission, one to distribute literature and one to have complete command. The smallest number of towns on any of the routes was six and the largest eleven.

The idea was to sell the return load proposition to the smaller town merchants. Merchants were asked to instruct wholesalers to route their freight by motor truck, and to sign a return load card favoring overland shipping. Letters have been sent out to trades or merchants' associations or mayors of each town vis-

ited, asking them to call a meeting of the shippers and receivers of their towns to meet with the crews. Posters were also sent out for posting in windows and wherever desirable, announcing the day the crews would be in the different towns.

### Return Loads for Canada

MONTREAL, Nov. 25—Arrangements are going ahead whereby the Return Load system is being got into tangible shape here. Already arrangements are being made for a service between Montreal and Schenectady, taking in the entire route between these two points; it is also being arranged to put on a regular service between Montreal, Three Rivers and Quebec, in addition to a constant daily service around the entire Island of Montreal.

The importance of the development of the Rural Express and Return Load system is at last being grasped by the manufacturers, dealers and farmers. It is hoped within the very near future that a network of truck collecting and delivering will be installed all over the Province of Quebec, with Montreal as the central distributing point. T. C. Kirby is devoting a large amount of time toward bringing the Return Load and Rural Express System to the front.

### Greenlease Heads Kansas City Association

KANSAS CITY, Nov. 25—The Kansas City Motor Car Dealers' Association held its postponed annual meeting on Nov. 13, electing the following officers and directors:

President—R. C. Greenlease, general manager, Greenlease Motor Car Co., Cadillac distributors.

Vice-president—H. M. Genung, secretary, H. A. Dougherty Motor Co., Republic Truck distributors.

Secretary—E. E. Peake.

Directors—A. T. Clark, retiring president, manager Anderson Electric Car Co., Detroit Electric branch house; Estel Scott, manager, General Motors Truck Co.; K. L. Day, manager, A. B. D. Motor Co., Chandler distributors; J. Frank Witwer, manager, Southwest Motor Co., Reo, Sandow and Jordan distributor; E. F. Williams, manager, Franklin Motor Car Co.; H. G. Kirkland, retail sales manager, Studebaker Corporation; B. E. Gridley, manager, Gridley Motor Co., Peerless, Auburn and Case distributors.

Secretary Peake delivered an address, cautioning against any let-up in conservation items that have proved beneficial, pointing out new lines for sales of cars, and the necessity for strong backing by motor car interests of good road programs.

The association indicated in discussion a desire to hold a show next spring, if such an event would not react unfavorably on any phase of the industry. Five hundred dollars was voted to the United War Campaign fund.

### Dorris Advances Its Truck

ST. LOUIS, Nov. 25—The Dorris Motor Car Co. announces a new price of \$3,425 on the two-ton truck since Nov. 1. This is an increase of \$440.

## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

C. W. Stephens has been appointed manager of sales for the Detroit Twist Drill Co., Detroit, succeeding Nelson J. Smith, who is now assistant to President Muir B. Snow.

E. V. Ripplingille, assistant sales manager of the Hudson Motor Car Co., Detroit, whose time since the entrance of United States in the war has been spent in Washington, where he has been engaged in special work for the government, has returned to his duties in Detroit.

R. R. Cook, one of the field organizers of the Lalley Electric Lighting Corp., Detroit, has been appointed assistant sales manager. Previous to his connection with the Lalley corporation he was foreign sales manager of the Cadillac Motor Car Co.

Thomas O'Brien has been appointed district sales manager for the Bethlehem Motors Corp., Allentown. His territory will be New York State and the New England States.

F. E. Pierce, formerly advertising manager of the Anderson Electric Car Co., Detroit, has been appointed district manager for the Elwell-Parker Electric Co., manufacturer of industrial trucks and tractors with headquarters in Detroit, and with factories in both Detroit and Cleveland.

L. C. Reynolds, formerly associated with the Oakland Motor Car Co., Pontiac, Mich., has been appointed manager of the motor factory of the General Motors Co. in Detroit.

H. L. Dunn, assistant purchasing agent of the Willys-Overland Co., Toledo, has been transferred to Moline, Ill., where he will become identified with the Moline Tractor Co., recently acquired by John N. Willys.

Jack Finney, former branch manager for the Maxwell Motor Co., Richmond, Va., and later connected with the Linger-Alsop Co., Maxwell and Chalmer distributor in that city, has received a commission as captain and is now in charge of the motor repair station at Fort Jessup, Atlanta, Ga.

George W. Franklin, formerly of the George W. Franklin Co., Detroit, distributor of the Dort, is now connected with the Leach Motor Car Co., Los Angeles, distributor of the Dort, Mitchell and Premier.

### Gilmore Heads Packard Branch

NEW YORK, Nov. 25—Roger J. Gilmore has been elected president of the Packard Motor Car Co. of New York. Gilmore, who has been vice-president of the company, has been in charge of its affairs since former president Hare was made executive vice-president of the parent company.

### Goldsmith Succeeds Moock

DENVER, Nov. 25—Harrison Goldsmith, assistant manager of the Miller-Ray Motor Co., Kissel distributor for Colorado, has been chosen secretary and business manager of the Rocky Mountain Automobile Trade Association. He succeeds Harry G. Moock, who has gone to St. Louis as assistant to President Vesper of the National Automobile Deal-

ers' Association. Goldsmith has also been appointed secretary of the Automobile Trades Bureau of the Denver Civic and Commercial Association, the two trades bodies having consolidated offices and main activities. Both organizations are giving their efforts almost entirely to advancing motor transport movements led by the Highways Transport Committee of the Colorado State Council of Defense, and the regional body will not try to branch out in other lines till after the first of the year.

### Allison Leaves Chicago Packard

CHICAGO, Nov. 23—H. M. Allison, who has been in charge of Packard distribution in this territory twelve years, has resigned as president and general manager of the Packard Motor Car Co. of Chicago. Allison has been identified with Packard here and in Detroit for nearly fifteen years. For two years he was president of the Chicago Automobile Trade Association. Much of the credit for the establishment of the national used car market report by Chicago dealers is given to him. A member of the Packard executive staff at Detroit is expected to succeed Allison. No information as to Allison's own future plans is available just now.

### Southeast Division of N. A. D. A.

ATLANTA, GA., Nov. 25—More than 300 dealers attended a meeting here Nov. 20, and successfully launched the Southeastern Division of the National Automobile Dealers' Association. More than 100 new members were enrolled in the N. A. D. A. at the meeting. The new division will cover North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana and Tennessee.

For the purpose of carrying on the business of the division, there is an executive to include two representatives from each state, such representatives to be elected at the end of each year by general vote. Following are the executives so far elected:

Georgia—R. H. Martin (Atlanta), Chairman.

Georgia—R. H. Arrington (Augusta).

Alabama—H. M. Hobbie (Montgomery), Vice-chairman.

Alabama—E. W. Brownell (Birmingham).

South Carolina—J. M. Black (Columbia).

South Carolina—W. T. Smith (Charleston).

Florida—Claud Nolan (Jacksonville).

Florida—J. R. Fowler (Gainesville).

Tennessee—Emmett S. Newton (Chattanooga).

The remaining members of the executive committee will be named at subsequent meetings which are to be held.

The Atlanta meeting is one of a series which will be held in a number of southern cities. On Nov. 19 nearly 200 dealers gathered at Charlotte and more than half of them enrolled in the N. A. D. A. On Nov. 21 a meeting was held in Jacksonville, 35 or 40 dealers attending.

## Price Reductions Have Disturbing Influence

### Buyers and Sub-Dealers Holding Off—Further Cuts Considered Unlikely in Trade

NEW YORK, Nov. 25—Following closely on the heels of the announcement of the Cadillac Motor Car Co. that prices of its several models had been reduced \$300, one other maker of passenger cars and one maker of trucks have made public revised price lists which show comparatively deep cuts. Chevrolet has lopped off from \$45 to \$145 on its cars and trucks and the Fulton Motor Truck Co. has come down \$150.

Price reductions coming at this time have had a decidedly disturbing effect on the retail trade. Both dealers and buyers are more or less up in the air and it probably will be several weeks if not longer before quiet reigns again. Buyers are inclined to hold off "until prices come down." Subdealers are loathe to take cars at present prices with the possibility of immediate future price reductions which will place upon them a burden in addition to the load they are already carrying.

Detroit manufacturers express the view that the action of the General Motors Co. will not be reflected by similar action on the part of other manufacturers. They point out that even though the market for supplies now is wide open in consequence of the cancellation of priorities and preference lists, the cost of materials is still high. Furthermore, the prices paid to labor are at new high levels. It seems extremely unlikely that any further price reduction will become general. There does not seem any possibility of a reduction in the price of materials. Labor costs cannot well come down until the cost of living is reduced. Despite these facts, it may be that some manufacturers will be forced into reduction, perhaps against their own best convictions.

Truck makers in general are quite frank in their statements that any reduction in prices is extremely unlikely. At least one manufacturer, the Denby Motor Truck Co., has made a strong attempt to build up the confidence of the public through large newspaper advertisements which point out in no uncertain language the fact that it is very unlikely that there will be any price reductions in the industry for a long time to come. On the contrary, it is expected that there may be a slight tendency toward higher prices before normal production is again reached.

### Fulton Cuts Price \$150

FARMINGDALE, L. I., Nov. 25—The Fulton Motor Truck Co., has reduced the price of its standard chassis by \$150. The old price was \$2,000 and the new price is \$1,850.

## Car and Truck Makers Can Get Supplies Now

### Priorities and Preference List Cancelled, Leaving Market Open to All Makers

WASHINGTON, Nov. 25—Passenger car, truck and motorcycle manufacturers can now go into the open market and purchase materials and supplies, and the makers of steel and other necessary automotive materials can supply these in any quantities and to any purchaser as a result of the cancelation of all outstanding priority ratings and the preference list by the Priorities Division of the War Industries Board. The order becomes effective Nov. 22.

The Preference List was a priority compilation of concerns engaged in war or other very essential work used by the War Industries Board for determining the importance of industries and those which should be given preference in securing supplies, labor and facilities. Although the list did not name truck and motorcycle makers the Priorities Board gave recognition to those industries by granting certain priority rights.

Under the new plan with the cancelation of this list which is completely terminated with the exception of priorities for the Navy, Emergency Fleet Corp., railroads, telegraph and telephone companies, the automobile truck and other automotive industries will be able to secure all of the materials they need on an equal basis with all other industries.

Applications for priority certificates can still be made by various concerns but will only be granted when the need is especially urgent and is clearly in the public interest. Production of food, which includes the manufacture of farm tractors, production of petroleum and the operation of mines and plants producing ores and metals, are recognized as especially important and will be given priority when necessary.

The War Industries Board emphasizes the fact that the cancelation of the priority list has nothing whatever to do with cancelation of war contracts, as the priority list is entirely disconnected from the placing of orders.

### Pedestrians Have Right in Street

BOSTON, Nov. 25—The full bench of the Massachusetts Supreme Court has just decided that pedestrians have a right in the street, according to a decision handed down in an automobile case. George G. Miller was driving his car through Reading one night about 10 o'clock. The sidewalk was muddy and so two girls stepped out into the street and were walking there. While getting out of the way of an approaching electric car they were hit by Miller's motor car, which was on the way to Boston from Haverhill. At the time he was engaged in war work.

At the trial the testimony showed that

he was driving a 56 hp. touring car at a speed of from 35 to 40 m.p.h., although he claimed that his speed was only 20 miles. The two girls were badly injured, one getting a fractured skull and the other a broken leg after being carried 80 ft. by the car.

Judge John F. Brown, of the Superior Court, ruled that the young women were not exercising due care and he directed a verdict for Miller. The attorney for the young women filed exceptions and took the case to the Supreme Court. Chief Justice Rugg, in writing the opinion, said:

"There can be no question that there was sufficient evidence of negligence on the part of the defendant Miller. He was violating statute 1909, chapter 534, sections 14 and 16. The speed at which he was driving might have been found to have been excessive and dangerous to other travelers. If the defendant had been traveling at a lawful rate of speed the young women would have reached a place of safety. Even if they did not pursue the wisest course in the light of what happened, that is not decisive against them."

The chief justice further added that the rights of an automobile driven in a public way are not superior to those of a pedestrian. This point will have an important bearing in many suits for damages in the future, for many motorists have contended that motor cars had the right of way on the thoroughfares except at cross-walks, etc.

### Los Angeles to Help N. A. D. A.

LOS ANGELES, Nov. 25—The responsibility of recruiting members for the National Automobile Dealers Association has been accepted for the Southwest by the Los Angeles Motor Car Dealers Association. At a recent meeting the following committee was appointed to take charge of the campaign: H. J. Coger, Troy Motor Sales Co.; E. R. Carpenter, Studebaker Corp.; O. R. Fuller, White Auto Co.; P. H. Greer, Greer-Robbins Co.; R. D. Heartz, Moreland Motor Truck Co.; O. B. Henderson, Willys-Overland Co. of California; Harold Tuttle, Howard Auto Co.; H. W. Nerney, W. L. Hughson Co.; Stanley Smith, Smith Bros.

This committee has named sub-committees in all cities and towns of Southern California. Every dealer in Southern California will be urged to join the association. The prominent position taken by the national organization in important affairs is pointed out to all dealers as the reason they should unite in its support. P. H. Greer, one of the leading distributors here, is a member of the directorate of the N. A. D. A. and is leading the drive for membership.

### Jobbers' Trial Jan. 6

NEW YORK, Nov. 25—Jan. 6 has been set as the date for the trial of the Government case against the National Association of Automobile Accessory Jobbers in the United States Court in this city. It is estimated that the trial will last until about the middle of February.

## Pennsylvania Now Has 2419 Tractors In Use

### State Department of Agriculture Completes First Census—1,568,270 Acres in Wheat

HARRISBURG, Nov. 21—There were 2419 farm tractors in actual work in Pennsylvania this year, according to the State Department of Agriculture, which has just completed the official "tractor census"—the first complete one ever made—of the State, county by county. Dealers, however, state that hundreds more tractors have been shipped into Pennsylvania, if not engaged in work on the farms. The department's figures compare with rough general estimates in 1917 of 1080 tractors in use.

Lancaster County leads with 209 tractors and Montgomery is next with 114 machines. Chester has 113 and Erie has 105. Every county of the 67 has at least two tractors. The counties richest agriculturally have the most tractors.

In some of the counties, notably Cameron, which has but 2, and Cambria, with 6, tractors have been slow in getting a hold. The department "census" is as follows:

Adams .....	39	Lancaster .....	209
Allegheny .....	66	Lawrence .....	29
Armstrong .....	54	Lebanon .....	68
Beaver .....	7	Lehigh .....	42
Bedford .....	44	Luzerne .....	36
Berks .....	79	Lycoming .....	84
Blair .....	30	McKean .....	36
Bradford .....	61	Mercer .....	30
Bucks .....	105	Mifflin .....	16
Butler .....	43	Monroe .....	26
Cambria .....	6	Montgomery .....	114
Cameron .....	2	Mountour .....	18
Carbon .....	24	Northampton .....	32
Center .....	21	Northumberland .....	11
Chester .....	113	Perry .....	5
Clarion .....	9	Philadelphia .....	15
Clearfield .....	42	Pike .....	6
Clinton .....	12	Potter .....	13
Columbia .....	8	Schuylkill .....	56
Crawford .....	33	Snyder .....	9
Cumberland .....	9	Somerset .....	54
Dauphin .....	30	Sullivan .....	3
Delaware .....	31	Susquehanna .....	23
Elk .....	27	Toga .....	6
Erie .....	105	Union .....	20
Fayette .....	22	Venango .....	46
Forest .....	10	Warren .....	7
Franklin .....	24	Washington .....	31
Fulton .....	7	Wayne .....	18
Greene .....	9	Westmoreland .....	94
Huntingdon .....	12	Wyoming .....	3
Indiana .....	39	York .....	73
Jefferson .....	35		
Juniata .....	13	Total .....	2,419
Lackawanna .....	15		

Pennsylvania has sown 1,568,270 acres of wheat this year, or 117,600 more than in 1917, according to the department's latest report and annual crop survey. Corn production is 63,597,435 bushels, or an average of 28.2 bushels per acre, as against 63,260,885 a year ago. Buckwheat went away ahead of the previous year, being 6,191,600, or 18.8 bushels per acre.

### Red Cross "Adopts" Greer College

CHICAGO, Nov. 25—Greer College of Automobile, Tractor and Aeroplane Engineering has been appointed official training school of the American Red Cross Motor Corps.

## Massachusetts Talks Over Its Future Laws

### License Fees, Truck Regulation and Roads Discussed—Plan Dealer Classification

BOSTON, Mass., Nov. 25—With the Massachusetts Highway Commission, Secretary of State Albert P. Langtry, and Administration Commissioner Thomas W. White sitting as a committee, many questions affecting motor vehicles were considered at the State House. There were present many big dealers, well known contractors, and others interested in automobiles and accessories. Col. William D. Sohier of the Highway Commission, who presided, announced that in addition to submitting a report to the next Massachusetts legislature he also would make a report to the meeting to be held at Chicago in December on kindred topics, when officials of the Federal government and the various states would be present to frame uniform laws.

#### Fees for Trucks Considered

The hearing dealt with fees for trucks, the weight of those vehicles, size of bodies, height of load, headlight regulations, destruction of highways, possible licensing of motor dealers by cities and towns to keep a check on cars to prevent theft, and making the penalty for stealing cars greater.

One of the results of the meeting was the suggestion of John H. Johnson of the N. A. D. A. that dealers be divided into classes for the purpose of regulating them, Class A to be the legitimate new car dealers; Class B, the men who handle used cars exclusively; Class C, possibly the men who handle cars for junking them. The first class would be asked to report the used cars they handle about once a month; Class B, perhaps every few days; and Class C, every day, making the latter hold their machines for a certain time before reselling or breaking them up.

The motor industry was well represented, and all the topics were discussed very fully and some good ideas were secured.

In discussing the truck fees, B. W. Twyman, Signal Truck, stated that with the additional cost of commercial vehicles now, which he estimated at being 40 per cent greater than a year ago, together with the Federal taxes about to be imposed, it would not be fair to make any change. He pointed out that the Government will not allow trucks to be sold now except to persons or firms engaged in essential industries. And with war taxes, to-day a buyer has to pay about \$150 more than he had to pay last year, with additional taxes going on next year. There was not much discussion of fees because of all these taxes, and the committee did not harp upon it to any extent.

The problem of weight of trucks and destruction of highway was threshed

out. M. E. Brackett, G. M. C., stated that he believed after the war there would be less long hauls between cities and therefore the need for restrictions would not be so great.

Colonel Sohier told of instances where loads had been so big bridges were broken and roads put out of commission. To use granite blocks would cost \$75,000 a mile, he told the motor people. So the problem was to solve the breaking up of the highways.

Amos J. Shorey, Velie, suggested that a limit of 10 tons for the truck and its load might seem fair. He also suggested two small trucks instead of one large one. This opinion was not concurred in by some of the others because they could not get man power, and also it might not be economical.

C. S. Henshaw, Dodge, said that there were 3-ton trucks carrying 5-ton loads that were wearing out the roads very fast. He further said that experiments were now being made with pneumatic tires to increase the speed, and this would increase the wear on the highways. On a question of controlling speed, J. W. Maguire, Pierce-Arrow, said that many manufacturers now equipped their trucks with governors. The sense of the meeting seemed to be that the present speed laws on trucks were satisfactory.

On the limit of width of truck bodies the discussion favored holding vehicles to something like the New Jersey law of 92 in.; also on height, as this State allows 16 ft., which seemed sufficient. The weight on tires was considered, but there were not much data on it. J. T. Scully, a Cambridge contractor, said that he used 42-in. wide tires, giving a weight per inch of about 650 lb.

#### Trailer Problem Discussed

The problem of trailers was taken up next. J. D. Rowe, a contractor, said that it will have to be met in the near future with the caterpillar type of tractors coming into use on our roads, and so something will have to be done to consider the limit in number one will haul. He said the tractors will not hurt the roads, but there may be congestion.

On the question of headlights J. T. Sullivan, suggested that the commission approve various devices because many motorists will not do anything until they know which devices are given official standing. Commissioner Synan thought that manufacturers of cars should equip cars to comply with the law, they having already equipped the machines with perfected tires, engines, spark plugs and other accessories.

Joseph S. Donovan, Studebaker, said the makers would be glad to do this if there were a national law to cover all the States. Mr. Shorey voiced a similar opinion.

Much discussion was given to the checking of thefts of second-hand cars. The question of having the dealers register their machines was again brought up, the same plan that was opposed before and rejected by the last legislature.

Chief Urquhardt, of the Arlington Police Department, said that a law should

be passed making it prima-facie evidence that a car was stolen if the numbers had been defaced. He also stated that the penalty for stealing cars should be strengthened because now a car may be stolen and the person doing it can get away with a nominal fine.

### Uniform Bill of Lading Adopted by Truck Owners' Association

PHILADELPHIA, Nov. 25—The adoption of a uniform bill of lading, which is expected to serve as a model for the country; the acceptance of an attractive emblem for protective use on motor trucks and as a design for stationery and the report from the road committee that progress had been made in obtaining material aid for construction of state highways were the high points in the monthly meeting of the Motor Truck Owners' Association of Philadelphia held last week.

The suggestion that a central office for recording the names of employees and giving their records for the information of other employers who might be interested, or who might receive applications from them, met with general favor. It is expected that such an office, or bureau will be established in the near future.

The bill of lading formally was presented as having been prepared for the association by its counsel and executive secretary, Harold S. Shertz, in co-operation with the Motor Transportation Division, Bureau of Markets, of the United States Department of Agriculture. It was explained that the purpose of the bill of lading was to work uniformity among motor truck operators, and to provide an equitable contract between shipper and operator.

The contract provides for full coverage of the contents of trucks and full protection to the shipper. The face of the bill gives notice to the shipper that the basic rate of carriage is constructed upon a maximum liability of fifty cents per pound and that any coverage in excess thereof on the basis of declared valuation will be carried upon the payment of a rate of charge assessed on the basis of the basic rate plus the actual premium charges for full coverage above the maximum assumed by the carrier.

#### Restrain Milwaukee Tank

WASHINGTON, Nov. 25—The Federal Trade Commission has ordered the Milwaukee Tank Co., Milwaukee, maker of automatic measuring oil pumps, tanks and devices for the storage and handling of gasoline and other volatile liquids, to discontinue "divers means and methods of inducing and procuring a large number of its customers and prospective customers and the customers and prospective customers of its competitors to cancel and rescind orders and contracts for the purchase of pumps, tanks and outfits placed with said competitors." The concern agreed to issuance of the commission's order waiving right to introduce testimony in support of its practices.



# MOTOR WORLD GUIDE

## Farm Lighting and Power Plants

Name	Capacity, Kw.	Cylinder Dimensions	Cooling	Control	Price	Name	Capacity, Kw.	Cylinder Dimensions	Cooling	Control	Price
Alamo.....	1	.....	.....	Automatic	\$450	Graelectric (4).....	1 1/2	No engine furnished	.....	.....	\$490†
Delco-Light.....	1/2	2 1/2 x 5	Air	Automatic	425*	Homelite.....	6-10	.....	.....	Automatic	325†
Delco-Light.....	3	3 1/2 x 6	Air	Automatic	900*	Jupiter.....	1/2	No engine furnished	.....	.....	335†
Dyneto.....	1/2	.....	Water	Automatic	340*	Kewanee.....	1/2	.....	Water	Automatic	430
Empire.....	1	.....	.....	Automatic	395	Lalley-Light.....	1	2 1/2 x 2	Water	Automatic	475
Fairbanks-Morse.....	.....	.....	Water	Automatic	.....	Perfection.....	1 1/2	.....	.....	Automatic	550
Genco-Light.....	1/2	.....	Water	Automatic	.....	Uni-Lectric.....	7-10	.....	Water	Automatic	472.50
Graelectric (1).....	1/2	No engine furnished	.....	.....	160†	Universal.....	1/2	.....	Water	Automatic	.....
Graelectric (2).....	1/2	No engine furnished	.....	.....	220†	Universal**.....	4	.....	.....	Crank	.....
Graelectric (3).....	1/2	No engine furnished	.....	.....	290†	Western Electric.....	1 1/2	.....	Air	Automatic	.....

\*Larger batteries to be had at higher prices. †Not including engine. ‡Universal Battery Co. \*\*Universal Motor Co.

## Book Reviews

"Electrical Equipment of the Motor Car," the series on the care and repair of starting, lighting and ignition systems, which has appeared each week in Motor Age, is being republished in book form, with additions, and the first volume, comprising one-half of the series, now is off the press of the U. P. C. Book Co., Inc., 243 West Thirty-ninth Street, New York City. Its price is \$2.50.

It was with the idea of treating the entire electrical apparatus in its relation to the car from the standpoint of one who knew absolutely nothing of electricity that a series of articles was prepared and published in Motor Age. This series was reprinted in this book with such additions and changes as inquiries and suggestions from readers had made it seem advisable.

The volume is designed to give the repairman, whether or not he be an electrical expert, that knowledge of the fundamentals of electricity and its application to cars in general that will permit him to properly operate and care for the electrical equipment of any car and remedy any electrical trouble in any car.

In this the effort has been to tie the new ideas of electricity up with the more common things of everyday life with which the readers are familiar. For this reason such analogies as the analogy of the flow of electricity to the flow of water and similar comparisons have been carried throughout the work.

The authors, David Penn Moreton and Darwin S. Hatch, are both men having not only the theoretical knowledge but the practical experience necessary for presenting the subject in an authoritative manner, but the vocations of both men have been such as to permit them to present the material in the way most

understandable to the lay reader and experienced repairman.

David Penn Moreton, associate professor of electrical engineering of Armour Institute of Technology, has directed the teaching of electrical subjects to students in automobile engineering, and to mechanics and electrical service men. Darwin S. Hatch is editor of Motor Age.

The Parlin & Orrendorf Co. has sent us a complete catalog of plows, tractors, cultivators and all sorts of machinery that can be pulled behind a tractor. This catalog is bound in cloth and is

several hundred pages in length and contains most interesting information about all different kinds of tractor machinery, hitches and that sort of thing, and is of considerable general interest as a reference book.

## Big Truck Demand From France Expected

PHILADELPHIA, Nov. 21—At the monthly meeting and dinner of the Motor Truck Association of Philadelphia, George M. Graham, of the Motor Transport Division, announced that 7000 airplane workers discharged from the Curtiss plant at Buffalo, N. Y., will be given employment at Hog Island.

Mr. Graham said that France will be a heavy buyer of American motor trucks for reconstruction work.

William H. Metcalf, secretary of the association, presided. Other speakers were David A. Ludlam, president of the Autocar Co., and E. J. Cattell, city statistician.

## Road Builders Meet in N. Y.

NEW YORK, Nov. 25—The American Road Builders Association will hold its sixteenth annual convention in New York. The convention will open on Tuesday, February 25, and close on Friday, February 28. There will be technical sessions twice each day and a dinner on one evening during the week.

## Autocar Enlarges New York Branch

NEW YORK, Nov. 25—Work is nearing completion on the addition to the Autocar Sales Co.'s building on West Twenty-third Street, and it is expected that it will be in condition to occupy before winter sets in. The new building, which is three stories high, will be used both for shop and office enlargement. The first two floors are 50 x 100 ft. and the third floor is 50 x 25 1/2 ft.

## Coming Events

Atlantic City, N. J.—Dec. 4, 5, 6—War Emergency and Reconstruction Conference of the War Service Committees.

Akron, O.—Dec. 5-6—Annual Convention, Ohio Automobile Trade Association.

Philadelphia, Pa.—Dec. 9—Meeting Philadelphia Automobile Trade Assn.

1919  
New York—Jan. 12-14—Society Automotive Engineers meeting.

Kansas City, Mo.—Feb. 10-15—Fourth Annual Tractor Show, Sweeney Bldg., Kansas City Tractor Club.

Guy H. Hall, Sec.  
Wichita, Kan.—Feb. 18-22—Annual Mid-West Tractor & Thresher Show, Wichita Tractor & Thresher Club; Forum.

Des Moines, Ia.—Feb. 17-22—Tenth Annual Automobile Show, Des Moines Automobile Dealers' Assn.

So. Bethlehem, Pa.—Feb. 17-24—Passenger Car Show, Lehigh Valley Auto Shows Co. J. L. Elliott, Mgr.

So. Bethlehem, Pa.—Feb. 24-27—Motor Truck Show, Lehigh Valley Auto Shows Co. J. L. Elliott, Mgr.

New York—Feb. 25-28—American Road Builders' Assn., Sixteenth Annual Convention.

Montreal, Canada.—April 5-12—Automobile and Used Car Exposition, Windsor Hotel. T. C. Kirby, Show Mgr.

# Farm Tractors

ABBREVIATIONS—"W" Wheel, "C" Crawler, "Dr" Drum, "G" Gasoline, "K" Kerosene, "D" Distillate. Flow capacity varies in relation to operating conditions. Figures are based on 14 in. plows.

Digitized by Google



Model		Motor	Ignition	Starting Lighting	WB	Tires	Rims	2- Pan.	5- Pan.	7- Pan.
OLDENMOBILE										
45-A	37	6-3124	Delco	Delco	120	34x4 88	.....	11945	1245	.....
OLYMPIAN	37	6-3124	Remy	Remy	112	32x4 88	.....	11895	1395	.....
OVERLAND	80	4-3124	Coan	A-Lite	112	32x4 88	.....	11240	1240	.....
803A	80	4-3124	Coan	A-Lite	112	32x4 88	.....	11175	1175	.....
803B	80	4-3125	Coan	A-Lite	104	31x4 C	.....	1095	1095	1145
803C	80	6-3124	.....	A-Lite	116	32x4 88	.....	1495	1495	.....
PACKARD	37-35	12-3 25	Delco	Eljor	136	35x5 QD	.....	4900	4850	5150
PAIGE	6-39	6-3125	Remy	G & D	117	32x4 88	.....	1515	1515	.....
6-35	6-35	6-3124	Remy	Remy	127	35x4 88	.....	1985	1985	.....
PATERSON	6-46	6-3124	Delco	Delco	120	32x4 C	.....	11595	.....	1595
PEERLESS	56	8-3125	A-Kent	A-Lite	125	35x4 88	.....	12550	.....	2550
PIERCE-ARROW	B-5	6-4124	Boech	Webbs	142	35x5 QD	.....	6400	6400	6500
PILOT	6-45	6-3125	Delco	Delco	120	32x4 88	.....	11495	1495	.....
PREMIER	6-C	6-3124	Delco	Delco	125	35x4 88	.....	12535	2535	.....
REO	6-3124	Delco	Delco	Delco	126	34x4 88	.....	1550	1550	1600
ROAMER	C-4-54	6-3124	Remy	Remy	120	34x4 88	.....	1395	1395	.....
SAVYERS	8-4	6-3124	Remy	Remy	112	32x4 88	.....	11195	1195	.....
SCRIPPS-BOOTH	8-4	6-3124	Delco	Delco	118	32x4 88	.....	1495	1495	.....
DAH	8-2124	Remy	Remy	Remy	120	32x4 88	.....	11285	.....	.....
STANDARD	8-3125	Webbs	Webbs	Webbs	127	34x4 88	.....	12750	.....	2750
STANLEY	2-4 25	.....	.....	.....	130	35x4 88	.....	.....	.....	3100
STEARN'S	4-3124	Remy	Remy	Remy	119	34x4 88	.....	12175	2175	.....
STEFENS	8-3125	Remy	Remy	Remy	125	35x4 88	.....	12700	.....	2700
STUDEBAKER	8-3124	Delco	Delco	Delco	118	32x4 88	.....	1725	1725	.....
STUTZ	8-7	4-3125	Delco	Delco	120	32x4 88	.....	2750	2550	2550
TRAMPLAR	4-45	6-3124	Remy	Remy	118	32x4 88	.....	2385	2185	.....
VEHLE	38	6-3124	Remy	Remy	115	32x4 88	.....	1540	1540	1540
WESTCOTT	38	6-3124	Remy	Remy	124	34x4 88	.....	2040	2040	.....
WILLIAMS-KNIGHT	8-18A	6-3124	Delco	Delco	125	35x4 88	.....	2490	2490	.....
WILLIAMS	8-8-4	4-3124	Coan	A-Lite	121	34x4 88	.....	1925	1925	2750
WILLIAMS	8-8-4	4-3124	Coan	A-Lite	125	34x4 88	.....	.....	.....	.....
WINTON	8-9-6	6-3124	Coan	A-Lite	120	33x4 88	.....	11775	.....	1775
WINTON	33	6-3124	Boech	Boech	128	35x5 QD	.....	3150	3150	3200
48	6-4124	Boech	Boech	Boech	138	35x5 QD	.....	3550	3550	3550
*6-passenger, 14-passenger, 12-passenger.										
OLDENMOBILE										
GRANT	6-3 24	Remy	Wagner	Wagner	114	32x2 1/2	.....	11945	1245	.....
HARROUN	4-3124	A-Kent	Remy	Remy	106	30x2 1/2	.....	.....	995	.....
HAYNES	6-3125	Remy	L-N	L-N	127	35x4 88	.....	11950	1900	1950
40	12-3125	Delco	L-N	L-N	127	34x4 88	.....	12010	.....	2010
HOLLIER	6-3124	Remy	Spiff	Spiff	116	32x4 88	.....	1485	1485	.....
188	8-3 24	A-Kent	Spiff	Spiff	116	34x4 88	.....	11855	1355	.....
HUDSON	6-3125	Delco	Delco	Delco	125	34x4 88	.....	.....	12000	2200
HUPMOBILE	4-3124	A-Kent	Eljor	Eljor	112	32x4 88	.....	1600	1500	.....
JACKSON	8-3 24	A-Lite	A-Lite	A-Lite	118	32x4 88	.....	11495	1495	1570
JONES	6-3124	Remy	Webbs	Webbs	126	32x4 88	.....	2000	2100	2100
JORDAN	6-3124	Delco	Eljor	Eljor	137	33x4 88	.....	.....	1775	2775
40	8-3 25	A-Kent	Eljor	Eljor	120	34x4 88	.....	.....	.....	2370
KISSEL	6-3125	Remy	Own	Own	117	34x4 88	.....	11644	1644	11644
LEXINGTON	6-3124	Coan	Webbs	Webbs	116	32x4 QD	.....	1485	.....	.....
LIBERTY	6-3124	Coan	Webbs	Webbs	122	34x4 QD	.....	.....	1685	1585
LOCOMOBILE	6-3124	Delco	Delco	Delco	115	32x4 88	.....	1570	11570	1570
LOZIER	6-3125	Boech	Boech	Boech	139	37x5 QD	.....	19700	15000	5000
84	6-3125	Boech	Boech	Boech	142	37x5 QD	.....	19700	15000	5000
MADISON	6-3125	Remy	Remy	Remy	124	34x4 88	.....	11485	1485	1485
MAIBOHM	6-3124	A-Kent	Wagner	Wagner	116	32x2 1/2	.....	1290	1290	1320
MARMON	6-3124	Boech	Eljor	Eljor	136	32x4 QD	.....	19350	3900	3950
MAXWELL	4-3124	A-Kent	Stemms	Stemms	109	30x2 1/2 C	.....	1895	895	.....
MCGARLAN	6-3125	Magnebo	Webbs	Webbs	136	35x5 QD	.....	4300	4300	4300
MERCER	4-3124	Boech	U.S.L.	U.S.L.	133	34x4 QD	.....	14000	4000	.....
MITCHELL	4-3125	Remy	Remy	Remy	120	32x4 88	.....	1465	1465	.....
D-40	6-3125	Remy	Remy	Remy	127	34x4 88	.....	1725	1725	.....
MOON	6-3124	Coan	A-Lite	A-Lite	118	34x4 88	.....	12000	2000	.....
MONROE	4-3 24	Coan	A-Lite	A-Lite	99	31x2 QD	.....	685	185	.....
M-3	4-3124	Coan	A-Lite	A-Lite	115	32x2 QD	.....	.....	995	.....
M-4	6-3124	Coan	A-Lite	A-Lite	116	32x2 1/2	.....	.....	1485	.....
MURRAY	6-3124	Delco	Wagner	Wagner	114	32x2 1/2	.....	12500	.....	2500
NASH	6-3125	Dirle	Webbs	Webbs	128	34x4 88	.....	2800	2800	2800
883	6-3125	Delco	Delco	Delco	121	34x4 88	.....	11490	1490	.....
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
NATIONAL	6-3124	Delco	Delco	Delco	121	34x4 88	.....	11490	1490	.....
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco	Delco	127	34x4 88	.....	.....	.....	1640
884-685	6-3124	Delco	Delco							

[illegible]



# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 10

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, DECEMBER 4, 1918

Fifteen cents a copy  
Two dollars a year



## Never Has the Future Held Greater Promise Than Today

Today the world stands on the threshold of the greatest era of progress and prosperity ever experienced.

The triumph of freedom has killed for all time to come the doctrine that might makes right.

Through the sacrifice of millions who laid down their lives on battlefields, the humblest person, the smallest nation may now enjoy life, liberty and the

pursuit of happiness, free forever from the dread of a mighty but unscrupulous neighbor.

Let us all, therefore, turn our hearts and hands to our appointed tasks with renewed and joyous energy—not forgetting that now as during the dark days of war our first duty is to our Country and humanity.

Let every one of us play his full part in the great task of reconstruction that lies before us.

**Hudson Motor Car Company**  
Detroit, Michigan





## We Are Ready for Dealers Now

OUR big factory—speeded up to war-time efficiency—is now available for the manufacture in quantity of Nash passenger cars and trucks for peace-time purposes. Nash Distributors are ready to sign contracts and assure Nash products in rapidly increasing numbers to Dealers. The Nash selling franchise now offers an unusual opportunity for a permanent and profitable business in your territory. Wire or write us today.

### *Nash Passenger Cars*

5-Passenger Car, \$1490    4-Passenger Roadster, \$1490    Sedan, \$2250  
4-Passenger Coupe, \$2250    7-Passenger Car, \$1640

### *Nash Trucks*

One-Ton Chassis, \$1650    Two-Ton Chassis, \$2175  
Nash Quad Chassis, \$3250  
F. O. B. Kenosha

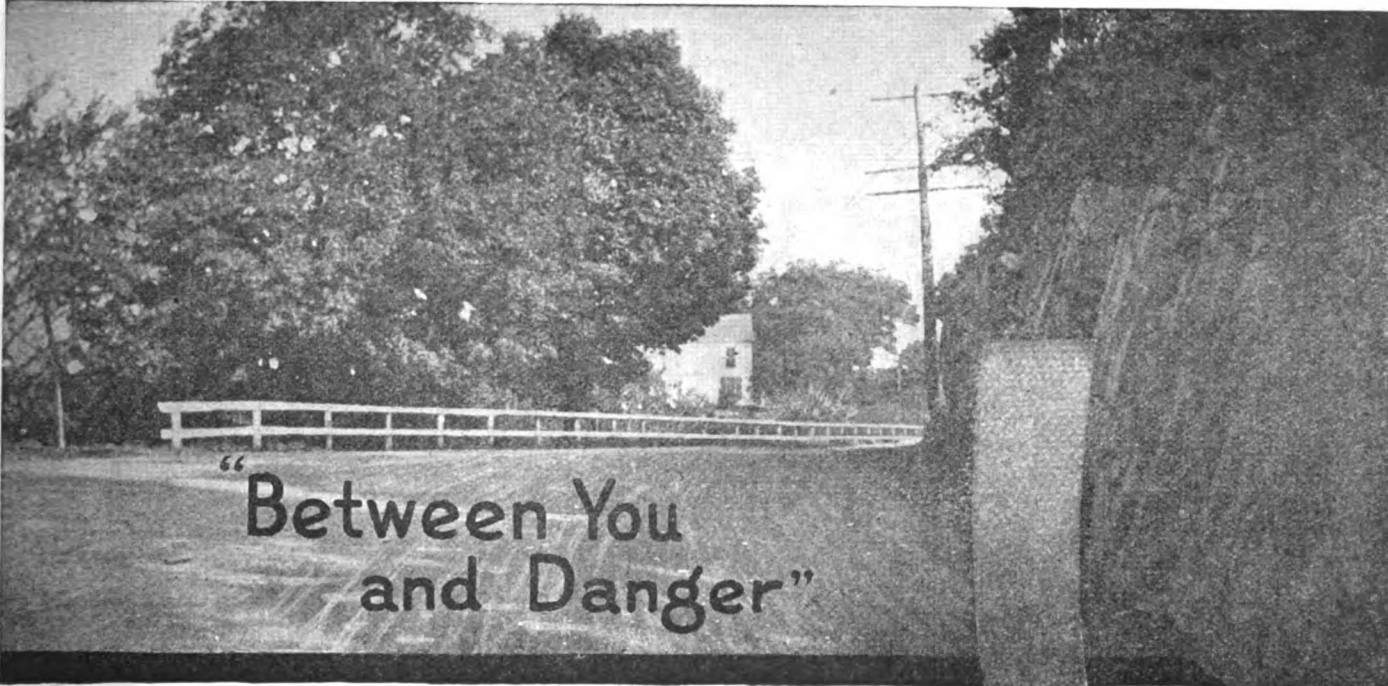
**The Nash Motors Co., Kenosha, Wis.**

*Manufacturers of Passenger Cars and Trucks  
Including the Famous Nash Quad*

# NASH MOTORS

VALUE CARS AT VOLUME PRICES





“Between You  
and Danger”

At points like this, when the other fellow suddenly appears, all depends upon the grip of the brake. There is no excuse for the car that fails in an emergency while

# RUSCO BRAKE LINING

is available. It is the lining that is withstanding the supreme test on cars and trucks of many makes.

The web of long fibre asbestos and brass wire, rendered impervious to oil and water, never slips.

You can help your business by advocating the universal use of this preventive of collisions.

**The Russell Manufacturing Co.**

Home Office and Factories 502 Russell Avenue, Middletown, Conn.

CHICAGO, 1438 Michigan Avenue

NEW YORK CITY  
349 Broadway

DETROIT  
18 Alexandrine Avenue, E.



**RUSCO**

Also Makers of

**RUSCO CLUTCH FACINGS**

When writing advertisers please mention Motor World—it identifies you

Digitized by Google

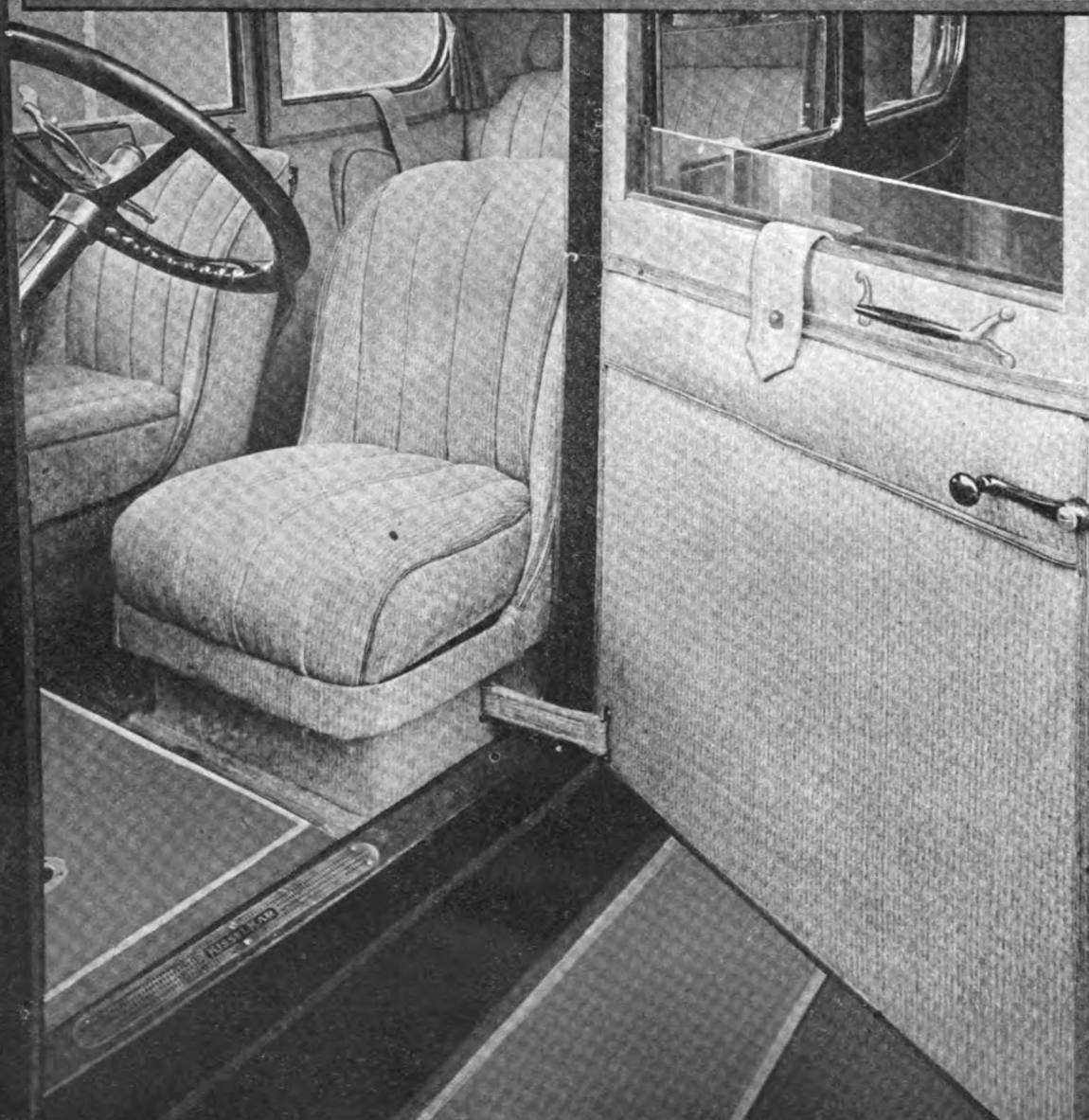
**"BRIDGEPORT"** Interiors are not only notable for beauty and artistic harmony, but they possess the quality—in material and workmanship—which withstands wear and continual usage. An enclosed car furnished with "Bridgeport" Fabrics represents the sum total of interior decoration.

## FABRICS BRIDGEPORT

The Bridgeport Coach Lace Company, Bridgeport, Conn.

New York Show Rooms, 1765 Broadway

Scovel Iron Co.—San Francisco—Los Angeles



# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

## The Class Journal Co.

U. P. C. Building, 231-241 West 39th Street, New York City  
 Horace M. Swetland, President  
 W. I. Ralph, Vice-President E. M. Corey, Treasurer  
 A. B. Swetland, General Manager

**Business Department**  
 Charles B. Shanks, Manager

**Editorial Department**  
 David Becroft, Directing Editor  
 Ray W. Sherman, Editor  
 Stanley P. McMinn, Managing Editor  
 J. Howard Pile

### Branch Offices

Chicago—Mallers Bldg., 59 East Madison St., Phone Randolph 6960  
 Detroit—95 Fort Street, West, Phone Main 1351  
 Cleveland—Guardian Bldg., Phone Main 1142

Subscription, Per Annum (Postage Paid).....\$2.00  
 Foreign and Canadian Subscriptions.....4.00  
 Single Copies (Postage Paid).....15 Cents

### Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to MOTOR WORLD.

Cable Address, "MOTORWORLD," New York  
 Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 243 West 30th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. C. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
 Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

Better, Bigger and More Valuable Shows.....	8
The Pot of Gold.....	12
Tractor Dealers Should Take Hold of Tractor Policies .....	13
Winter Business .....	16
The Reilly Story.....	18
Scientific Construction.....	19
Better Mechanics.....	20
The Law.....	23
Repairshop Shortcuts.....	24
Editorial Observation.....	26
Letters from Readers.....	27
Omaha Is After the Tractor Trade.....	29
Retail News.....	31
Gray Tractor Refined.....	32
Automotive Equipment .....	34
Colorado and the Rural Express.....	35
Regular News Department.....	38
Specification Tables	
Tractors .....	45
Trucks .....	46
Passenger Cars.....	48

Advertisers' Index on Pages 134-135

# "NORMA" PRECISION BALL BEARINGS

(PATENTED)



In normal times salability may be placed before serviceability. But in times like these, serviceability comes into its own—salability becomes a minor consideration. To "make good"—to be adequate—to bear a full share of the national burden—these are the big essentials now. And the machines which most conclusively proved their serviceability during the war will now be the ones that find the readiest market.

In peace-time, as in war-time, "NORMA" Ball Bearings will prove their serviceability in the ignition apparatus and lighting generators used on the cars, trucks, tractors, power boats and airplanes which meet the service demands on land, at sea and in the air, at home and abroad.

*Be SURE—See That Your Electrical Apparatus Is "NORMA" Equipped*

**THE NORMA COMPANY OF AMERICA**

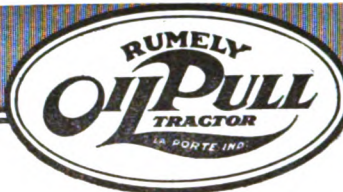
1790 BROADWAY

NEW YORK

*Ball, Roller, Thrust and Combination Bearings*







# Proved by 10 Years Farm Work

Breaking virgin sod, sun-baked for years, on the prairies of the West—deep-plowing the much tilled land of the smaller farms of the East—year after year of the hardest kind of farm work has proved the supreme fitness of OilPull Tractors.

This dependability and service has been remarkably demonstrated by the first OilPull built that is still working in South Dakota, and by old OilPull No. 11 still on the job in Michigan—year in and year out continuous performance that gives the only real basis upon which a tractor can be judged.

In these ten years the OilPull Tractor has built up a record of continuous, reliable, economical operation unequaled in the tractor industry.

# Backed by a Written Guarantee

And as if it were not enough that throughout all these years the OilPull has proved its ability to operate successfully on all grades of kerosene, the makers give you an absolute guarantee that it will do so. The fact that this is the only tractor company that gives such a fair and square, iron clad written guarantee tells a big story in itself.

Moreover, wherever you find this guaranteed tractor of proved performance, you will find near at hand Advance-Rumely service—established and maintained through 24 branch offices and warehouses, where complete stocks of machines and repair parts are always on hand.

The Rumely OilPull tractor may be had in sizes from three to ten plow, standard as to design and construction—a size to fit every farm.

A 1919 Advance-Rumely dealer's contract is worth going after.

**ADVANCE-RUMELY  
THRESHER CO.**

La Porte  
Indiana

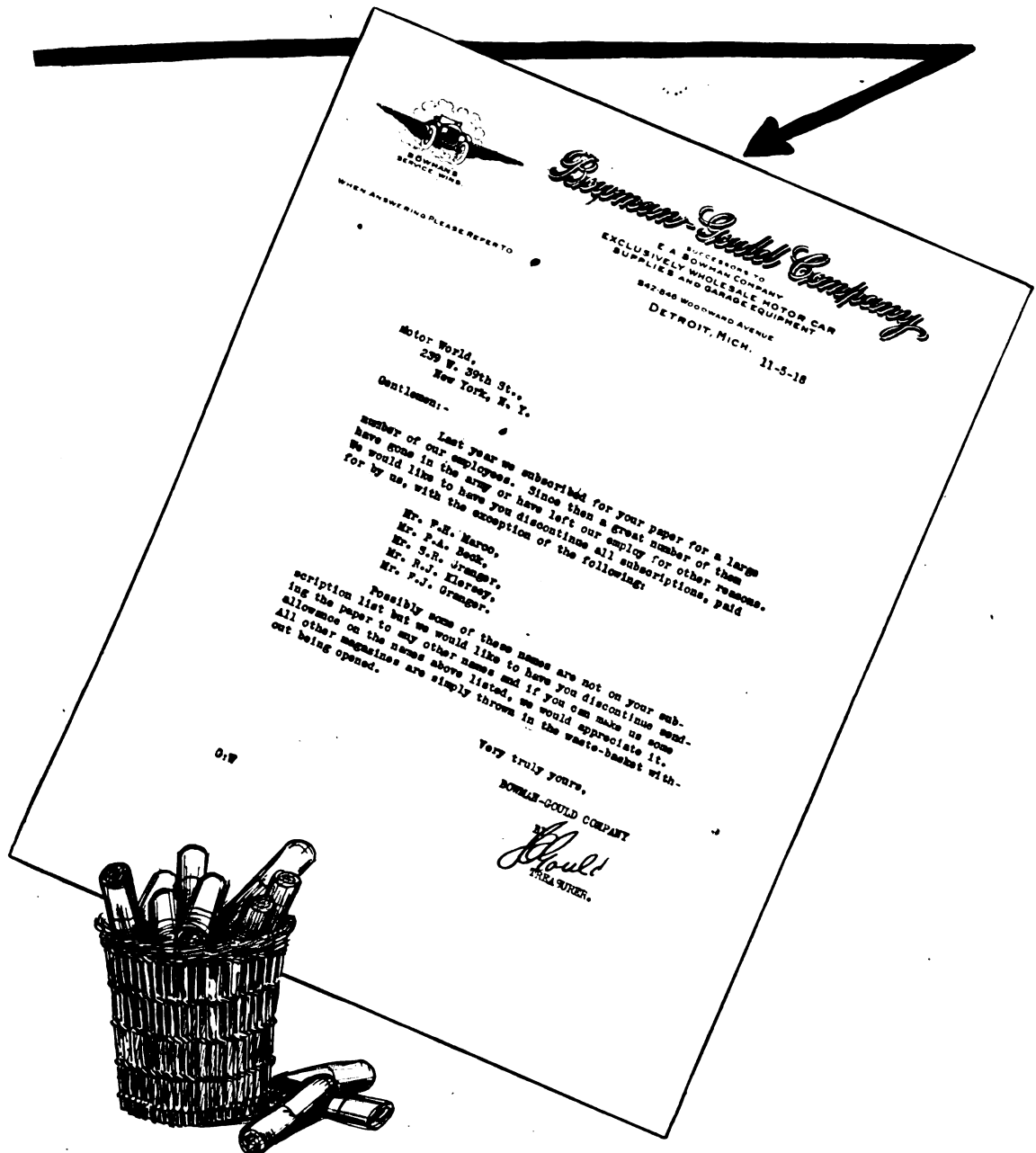


# ADVANCE-RUMELY



## A MESSAGE FROM DETROIT

There are two kinds of business papers. One kind is read—the other isn't. The following reprinted letter is a message from Detroit.



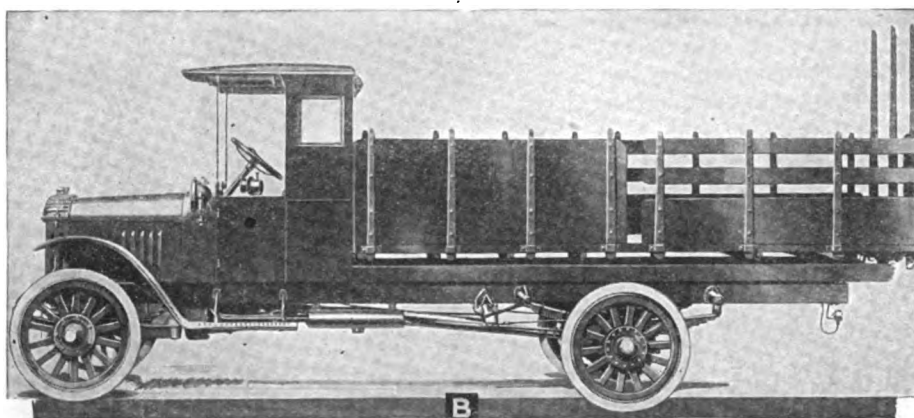
# GRAY & DAVIS

## Starting-Lighting System

### for MOTOR trucks

In the very near future every Truck Buyer will be satisfied only if the truck he buys contains all the modern features of up-to-date truck construction, including a starting and lighting system of quality and lamps especially constructed for truck use, making them serviceable for twenty-four hours a day.

*Bethlehem  
Truck  
Motor*



*Equipped  
the  
Gray & Davis  
way*

**2½ Ton Bethlehem with Stake Body**

**GRAY & DAVIS, Inc., BOSTON, MASS.**

# MOTOR WORLD

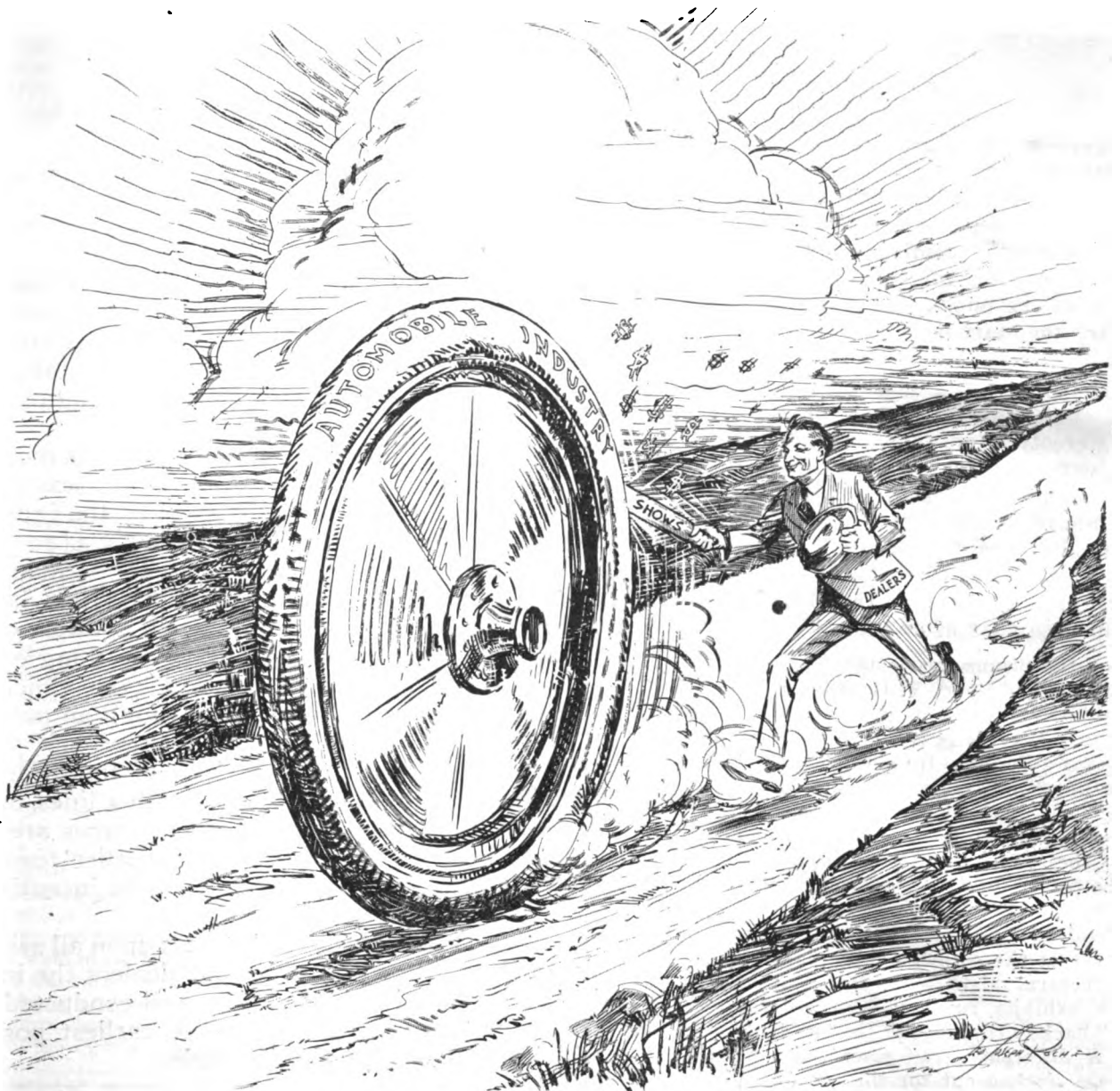
for  
DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, December 4, 1918

No. 10

## Make 'Er Roll!



Better  
Bigger and  
More Valuable

# SHOWS

*Show Managers Vote for Different Expositions from Those of Previous Years—Advertising Greatly Needed*

## NEW YORK AND CHICAGO DEALERS TO HOLD NEW YORK AND CHICAGO SHOWS

ONE thing the war did, and that was throw the automotive business out of a rut—including its rut on the show question.

At the meeting of the National Association of Automobile Show Managers in Cleveland last week the representatives of America's biggest shows voted that all managers and dealer associations should make the coming season's shows something that will strike the eye of the public and give the industry the start it so very much needs.

A resolution, printed elsewhere, urged that shows get away from the "stereotyped form which previous expositions have sometimes taken." In other words: Get away from the old stuff, with the same cars in the same places, the same arrangement, the same old decorations more or less, and the effect of sameness year after year.

When the discussion on this point began Manager Harry T. Gardner of the Syracuse show told in a black-board talk how he is going to make his shown different. He plans to lay before his directors an arrangement different than Syracuse has ever had before. When he tells the newspapers the show is "different, bigger and better" he "wants to tell the truth."

Instead of two aisles, one down each side of the main hall, he plans a big central aisle with deep but narrow exhibits running from this "walk" back to the sides of the building. A different arrangement also has been worked out for the second

hall. This gives the same amount of space as before, but is vastly different.

Other managers are working on plans to get a "different" effect.

It was also agreed that the shows must become better expositions. An effort must be made to get exhibitors to dress

up their exhibits, and the shows must be kept clean and show-like.

There also will be a greater effort made this winter to induce dealers to study intensive merchandising. Last winter Kansas City held a salesmen's meeting the night before the show opened, and the salesmen took the teachings of this session into the show. It

### On with the Shows!

**A**T a meeting of the National Association of Automobile Show Managers, held in Cleveland November 25 and 26, the following resolution was unanimously passed and ordered transmitted through our secretary, Ray W. Sherman, to all interested associations of automobile dealers:

**RESOLVED**, It is the unanimous sense of this meeting, as expressed by this resolution, that there never was a time in the history of the automobile business when the necessity for a well-conducted and well-advertised show was so great.

We find the consensus of opinion among the men who have come to this meeting, from twenty-four cities, is that there is at this time a lethargy among buyers of automobiles and a disinclination toward the buying of anything except the bare necessities of life. This condition is one which can be corrected by the proper advertising through an automobile show.

We also feel that an automobile show at this time will go very far toward stimulating business in other lines, bringing as it does to the various centers where shows are held dealers and prospective buyers from the smaller towns in country districts and holding before them the incentive to buy other things than automobiles.

We therefore urgently desire to impress upon all associations of automobile, truck and accessory dealers the immediate and urgent necessity for holding well-conducted and well-advertised automobile shows at the earliest possible dates at which arrangements can be made.



## The Show Managers Who Vote for Shows



1—E. E. Peake, Kansas City, president of Show Managers Association. 2—Robert E. Lee, St. Louis. 3—H. H. Shuart, Detroit. 4—W. W. Garabrant, Utica. 5—Joseph C. Bell, president of Newark, N. J., association. 6—C. G. Van Vliet, Des Moines. 7—Claude Holgate, Newark. 8—Herbert Buckman, Cleveland, assistant manager. 9—Ray W. Sherman, New York, secretary-treasurer of Show Managers Association. 10—Clarke G. Powell, Omaha. 11—John L. Brock, Trenton. 12—Harry T. Gardner, Syracuse. 13—A. E. Maltby, Philadelphia. 14—Charles A. Stewart, New York. 15—Timothy D. Beard, Chicago. 16—I. C. Kirkham, Brooklyn. 17—John J. Bell, Pittsburgh. 18—Fred H. Caley, Cleveland

## New Ideas Needed for Show Success

Things Exposition-Promoting Organization May Do to Bring Back the Money-Making Lime'light

was even suggested that salesmen wear dress suits every evening, because a man in a dress suit **MUST** be up on his toes and therefore more efficient.

The meetings held during the various shows last year will be duplicated in more extended form. A resolution was passed to the effect that "there be arranged meetings and conventions for the discussion of trade problems and the development of ideas which will bring about immediate benefits and provide for future substantial development of the industry."

That dealers must also assert their place in civic matters and become a greater part in the business life of their respective cities was epitomized in a resolution relating to civic co-operation. The motor shows bring big trade of all kinds to cities, and for this reason dealer associations were urged to secure the co-operation of the various boards of trade and associations of commerce and get what assistance those organizations can give to make the show a greater success.

(Continued on page 11)

**I**N opening the meeting of show managers in Cleveland last week the program was outlined by the secretary-treasurer, Ray W. Sherman, as follows:

The necessity for shows was very apparent as soon as the armistice was signed and we could see that it was possible for business to go ahead.

For a long time the public has been educated not to buy things, even when it had money with which to buy. It has had a negative education so far as our business is concerned.

Fifty years from now an automobile will be as essential as a bathtub is today, but it is not now so regarded by the general public. It is looked upon to a certain extent as a luxury, and the public has been educated not to buy those things. That must be overcome.

The public also thinks that the price of automobiles is going to come tumbling down as soon as the war is over.

People also believe that the industry is gone. There are many of these negative factors which will be remedied if we

can have shows and show the public that the industry is still here. It will stimulate buying, as it did to a certain extent in Pittsburgh, where they held a show last week.

### New Era at Hand

In coming into this new era which has been created by the war, we are coming into a world of people with new thoughts and new ideas and new ideals, and things are going to be different. The man who cannot see that he is entering now into a different world is a man who is not going to be able to cope with things as he finds them. He is going to find himself seated by the side of the road, and when the procession goes on he will be left behind. For this reason I believe that the *automobile shows have got to be different affairs than they have been in the past.*

Often people have told us: "The time will come when the public will cease to take interest in your exhibitions. Your shows will be old stuff." Perhaps that is true. Up until the time the war came, however, it was not true. Shows had been held and they were successful.

### Civic Co-operation

**WHEREAS**, One of the greatest lessons that we have learned from the war is that united effort is all that counts, and

Whereas, It has been made plain and obvious that in the years to come no country, no nation, no community, no industry and no business man can remain aloof from their fellows but must co-operate, not only for collective profit but for individual profit, and

Whereas, The automobile shows as held in various cities have inured to the profit, benefit and good, not only of the automobile trade itself but of other businesses of the community,

Therefore, be it resolved, That in cities where shows are to be held that the members of the National Association of Automobile Show Managers, through their respective local organizations, bring about so far as possible a practicable and greater degree of co-operation between the organization conducting the show and other civic bodies of the respective cities, such as Retail Merchants' Boards, Chambers of Commerce and similar associations.

Resolved, That where necessary, and if necessary, there be called to the attention of these associations as well as the newspapers and similar institutions of the city, the benefits which the entire business and civic community derives from the holding of the modern progressive motor exposition.

The question now is: "Will shows continue to be successful?" I believe they will—but I still believe that it is up to the manager of each show to make his show something different than he has ever had before. We have had automobile shows, and people have talked about tractor shows and automotive shows and all that sort of thing. Perhaps trucks are coming into our shows—perhaps not. Perhaps tractors will come in—perhaps not. But I want to tell you right now that the Minneapolis show last year was the most sensational event that has ever occurred in the history of the automobile trade—a show bigger than New York and Chicago put together, attended by a crowd which broke down the gates, so big that the directors of the association had to go out and stand in the doorway and take fifty-cent pieces and pass the people through the door without tickets. I think they set an example for the rest of the people in this industry.

I have gone to shows for three years and have made much the same circuit each year. Many times I have gone into a show and to myself I have said: "It is the same old stuff."

### New Arrangements and Plans

Sometimes I have seen the same old decorations underneath and overhead,

the same old cars, in the same old places, and the same old people; and while that may lend an element of stability, *I don't think that that atmosphere is conducive to the future success of automobile expositions. You must have new arrangements and new decorations, and there must be a new enthusiasm and a new idea on the part of the people who are going into these things.*

*The dealers must be sold this new idea, and I think it is up to the manager of the show to sell this idea to the people in his own home. I think if he doesn't do that he is negligent in his duty as a show manager. If he does do that I think he creates a bigger and better job for himself.*

### Automotive Educational Week

There is also the educational idea which is coming up in the trade. Last winter in Minneapolis, in the Pence building, there were conducted schools for the men of Minnesota, the Dakotas and Montana. This distributor covers four hundred thousand square miles of territory. One day in his building there was a battery expert teaching battery mechanics to men who wanted instruction in those things. At different hours of the day there were other departments there, and all week long this school was conducted in the Pence building. *The week of the exposition was a week in which this man did constructive and educational work that could not help but raise the efficiency of his organization.*

Now here is a suggestion that may or may not fit. It is just a wild idea, perhaps, but, assuming that you were to get all of the dealers in on, let us say, Tuesday and Wednesday of a normal show week, why could not a distributor have meetings of his own dealers in his own office in the mornings with perhaps a more general meeting in the afternoon—and link the National Automobile Dealers' Association up with this thing—and perhaps it might be possible to secure Mr. Fenn of the National Automobile Chamber of Commerce, who could talk on the Rural Motor Express and on the future of the truck.

*This would be really educational. Then, instead of having the men come in from the territory, go over to the show for thirty minutes and then go back home without having gotten any good from this visit to the show, they would actually learn something.*

### Better Merchandising

The dealers themselves must be sold on a better idea of merchandising in the shows. Too many shows look like an ordinary garage exposition. Cars are run in with no attempt at display, and some associations have a rule which prevents a dealer putting anything in an exhibit to warm it up or make it look attractive. *You invite the public to come and see an exposition, and then you have a lot of rules that prevent a dealer from making his exposition look like an exposition. I believe those rules should be withdrawn and dealers should be encouraged to make their exhibits A1.*

I cite the case of Philadelphia last

### Advertise!

**WHEREAS**, Advertising has been one of the greatest contributing factors to the building and development of the automobile industry into becoming the third greatest manufacturing industry in the world, and

Whereas, The advertising done by the various factories in the automobile industry has been not merely aggressive but dominating,

Therefore, be it resolved, That it be the sense of the National Association of Automobile Show Managers that aggressive advertising campaigns be executed in order that the automobile industry may take no backward step but that it continue in an aggressive and progressive manner.

year, where a man bought show space and with it bought an arrangement of cars. He put his cars where the management told him to put them. The result was that the Philadelphia show last year was not crowded with cars and was one of the best shows I have ever seen in all my show experience, and I think I have seen practically all of the principal shows in the United States for the last few years.

### Better Salesmanship

Salesmen should be taught how to get for the dealer a maximum out of the show. Last winter on Saturday night before the Kansas City show opened, Mr. Peake had a meeting of four hun-

### Hold Trade Meetings

**WHEREAS**, Of late years automobile shows have become less and less mere exhibitions and have taken on more and more the qualities of important trade gatherings and conventions, and

Whereas, Great benefit has been received by the trade individually and collectively therefrom, and whereas, this development of the automobile shows has created a better impression on the general public.

Therefore, be it resolved, That in cities where shows are to be held, that the members of the National Association of Automobile Show Managers through their respective associations bring about a greater trend toward this convention idea, and

Be it resolved, further, That there be arranged meetings and conventions for the discussion of trade problems and the development of ideas which will bring about immediate benefits and provide for future substantial development of the industry.

dred salesmen in the sales room of the Dougherty Motor Company. Down at one end of the room behind the curtains there was on one side a demonstration—with which we are all familiar—of the wrong way to run a show. The cars were jumbled, there were coats on the hoods, papers on the floor, a drunk asleep in a sedan, a colored porter sitting on a fender, and the salesman who gave the rotten exhibition must have been extremely good or he never could have been so rotten.

On the other side of the curtain was an exhibition of how to put on a show. There were palms, a rug on the floor, two cars here where there were three in the other, the exhibition was not crowded and you could see good merchandising all the way through.

It had a wonderful effect on the Kansas City show of last year. From a merchandising standpoint, from the morale of the salesmen and the dealers, that was the best show I ever saw. That meeting did it. As I went through the show I got a number of comments from the salesmen. They admitted that it did it.

#### Dress Suits Every Evening

On society night in that show and in other shows salesmen cannot loaf and they cannot lean on a fender or sit on a running board because they have dress suits on. *I offer to you the suggestion that every evening the salesman wear evening clothes. I believe he would be a better and more efficient salesman. He can't loaf, and you have a better appearing show anyhow.*

Literature in shows is put on tables, picked up, and thrown on the floor. Some shows are dirty. The floor is littered with papers. In the Kansas City show there is a man whose duty it is to go around the show every hour and clean the floor, pick up the papers and cigar butts—if one gets in—and the show is absolutely clean. Next to Boston, it is the cleanest show. The Boston show is the cleanest show in the world, because they mop the floor every morning.

Accessory manufacturers and jobbers are disposed not to look with favor upon the space that is ordinarily given to accessories. They are put under the back stairs and given very poor accommodations. The arrangement of the display is not good. Two years ago, I think it was, on the second floor of the Fort Dodge show, they took the center space in the floor and put on a beautiful accessory display, a lot like the fourth floor in the New York show.

#### Favor the Accessory Men

I think you should pay more attention to these accessory men, because they are for shows and they are for you, and they'll come in better in every way if you'll only give them a little encouragement. You can make friends of those people.

Next we come to the question of advertising. We admit that there is a need for shows. Very well, then, we decide that we will have shows. Now the next thing is to put your show over, because

### Better Shows

**WHEREAS**, The world is entering into a new era with new conditions, new ideas and new ideals, in which business will be different than it has ever been, and

**Whereas**, The automobile industry must maintain its position of leadership and present to the public an exposition of extraordinary merit, in keeping with the new era now dawning, and

**Whereas**, All business has come to look to the automobile industry for the exposition of new ideas and progressive principles,

**Therefore**, be it resolved, That in such communities in which automobile shows are held the constituent members of the National Association of Automobile Show Managers bring about so far as possible through their various organizations, expositions that will in every respect portray and express the new conditions and the progressive ideas.

**Resolved**, That there be brought about so far as possible new features to impress upon the public the development and growth of the automobile industry.

**Resolved**, That so far as practicable the expositions present divergence from the stereotyped form which previous expositions have sometimes taken.

after having put your show on, if you don't put it over you have hurt yourself more than you have done yourself good.

I believe you have got to advertise it. It should be advertised in newspapers and billboards. More than ever before you must advertise your shows. In Kansas City, co-operative advertising was started last winter with considerable success. In connection with that, *I don't believe that the individual dealer should cut down his advertising space. I believe that everybody has got to advertise the show and push it to put it over.*

#### Good Newspaper Co-operation

You have got to have better newspaper co-operation. There is a point where there must be co-operation between publishers and advertisers. There must be co-operation between newspapers and the different lines of business enterprises in their city because a newspaper that is only a purveyor of news and is not a civic institution is falling short of the standard that I believe should exist for a newspaper.

*I believe that the manager of the show and the directors of the association could well call together the managers—not the automobile men, but the influential men on the newspapers—have a conference with them and sell them the idea of giving a little support and publicity to this business so that this business may grow and, in return, the newspapers may be benefited.*

### Better Shows

(Continued from page 9)

The Twin City show brings more business than fair week, and the Kansas City show is said to mean more to that city's merchants than Christmas week. Co-operation of civic bodies with the dealers will benefit all business.

To start the ball rolling and to get the selling season under way at once dealers were urged to advertise, now and during the shows, and to give the dormant buying power of the country a big push for the spring business that all feel must come soon. But they want it NOW, not next spring.

Securing buildings is one of the big problems of the dealers. Structures that have been used in previous years have been in some cases taken over by the Government. The abandonment of the show schedules some time ago means the relinquishment of dates, so that with the sudden revival of the shows the old dates are not always available.

But Minneapolis, which put the trade's eye out last winter with the biggest show ever held, says it is going to have the Overland building again, and will have a bigger show than it had last year, Feb. 15-22.

Boston is somewhat handicapped by the fact that there are 1000 Tufts students in Mechanics Building, and they may or may not be out by the time the show would be held. However, Boston is hoping—and working.

Throughout the country there prevails an impression that the abandonment of the New York and Chicago shows by the National Automobile Chamber of Commerce is a calamity and that the keynote of the show season will not be sounded. Many believe the whole show season will fail without these two expositions.

The New York and Chicago shows will, however, be held. They probably will look just the same as they have looked in other years, there will be just as many hotels open—if not more; the same old faces will be there, the enthusiasm and fellowship will be as great—if not greater, and the only difference will be that the shows will be run by the dealers in those cities instead of the manufacturers. One who attends these shows will never know the difference. The annual pilgrimage to the shows—and to Broadway and Michigan Avenue—need not be abandoned. In fact, the need for coming is greater than ever, for it is worth while for every dealer to see what his brother dealers in the two big cities can do in the show line—and to applaud their effort.

The New York dealers want to hold their show as early as possible—in February if they can. The Chicago dealers will hold theirs a little earlier. The New York dealers may use Madison Square Garden—where the motor show of America was born—because the Government is using Grand Central Palace as a hospital and won't be out before June.

The New York dealers plan to invite all the dealers in the United States to their show.

FARM LIGHT IS

# THE POT OF GOLD

## AT THE END OF THE RAINBOW

---

*It Is Really There and Those Dealers Who Don't Go After It Will Be Stay-at-Homes in the Rush to This Merchandising El Dorado, Says a Distributer Who Is Selling Farm Light*

---

**T**HE motor car dealers have proven to be a disappointment to Phil Brockman, president of the De Luxe Automobile Co. of St. Louis.

When Brockman saw dull times ahead in the motor car selling—his company is distributer for the Oldsmobile in this section—he set about finding something else to keep the business going and he thought that the car dealers would welcome an opportunity for a live selling article.

So he selected the Lalley farm light and organized the Brockman-Lalley Farm Light Co. and went to work. He is making things go, but not entirely through the motor car dealers, as he expected.

### Car Dealer Without Initiative

"The motor car dealers appear to be too willing to let well enough alone," said Brockman. "We have signed up a few live ones to sell farm lights, *but nothing like the number that we expected.*

"I have been perfectly amazed at the way some of these dealers, that we thought were live ones and game to the core, have wilted under the stress of the war. When we notified our dealers that the Oldsmobile factory was going on a 100 per cent war basis, a surprising number of them took down their deposits and we have lost connection with them.

"We had asked them to come in on the light proposition before that and a few responded. Some of these are doing fairly well and a few are doing very well.

"But most of those dealers failed to figure that their Oldsmobile franchise was worth more than their deposit to them after the war, and that their special per cent on parts was well worth what money they had up.

"So we have lost touch with a good many of our dealers but we know pretty well that most of them are settling down to the service proposition and are going to live on what they made during the two very good years they have had, and what money they can pick up in the service business.

### Lack Imagination

"The main trouble with the motor men appears to be that they lack imagination. They can not see that many little things make a big thing. We have worked over Missouri on the prospect line until we can show the possibilities of each county for farm light. We know, for instance, that there are 276,000 separate farms in the state. That looks like a good many prospects for lighting plants.

"We have gone to these dealers and opened the book to their county and showed them how many farms there were, what the average value of these farms was and how the farm houses ranked in worth and what the average indebtedness was; how many motor cars and how many trucks are owned in the county. Also we have figures on how many buy pianos, etc. All of these things serve to show that many of the Missouri counties are going to absorb, within the next few years, more than 2000 of these light plants and that the man who has a good one before the people early in the business is going to sell a big share of these 2000.

"But they harp back to the single plant, its price, etc. They do not talk of the accessories and I am afraid that this very fine business prospect is going to others than the motor car dealers.

### Trade Papers Great Stimulant

"But we are showing some of them and a few others are waking up to the prospects. Our very best prospect of realizing on the motor dealers now is for the trade papers to keep pounding at them. Such work as Motor World is doing means much, for a good many of these dealers read the trade papers. If we could get all of them to read earnestly

*the Motor World Winter Business number, the trade would be livened up and there would be an army of men up and on their toes for work.*

"And they would be in better position to handle the cars when they come back. As it is, I am afraid some of the former motor car men are going to be too rusty to take up the business again when cars come back. *They will have shrunk to service shop size and perhaps they will stay here.*

"But to get back to the light dealers. We have a man in St. Louis County who is one of our surprises. He is a telephone man and this light proposition came to his attention partly by accident. He equipped himself with a demonstration outfit and is making more than \$50 a week out of a side line. Some day soon I suspect that he will make his arrangements to go into the business as the real thing and there is big money ahead of him, *for he can sell lighting plants.*

### Piano Dealer Takes On Farm Light

"Another very good dealer we have is a piano man. He stands the hard introductory work very well indeed. He is not getting any pianos to sell, or very few, and he has hired a man to take charge of the piano end of the business and is at work selling lighting plants and is making good.

"We are not able to start out some of our best Oldsmobile men because they feel that they must take care of the motor cars they have sold. Some have asked us to find men to take charge of their service shops—men competent to make general repairs—but we are not able to do much in that line. We are having troubles of our own to find men for our shop here. If we had half a dozen good service men, we could place them in country shops so that the proprietor could give the time to selling lighting plants that they formerly gave to selling cars and they would start things to humming.

"Now here is a peculiar case that has provoked me somewhat. Two years ago  
(Continued on page 44)



*E. Gordon Lee of Rochester, N. Y., addressing an assembly of farmers at a state tractor demonstration at North Rose. Lee is taking a leading part in the fight to eliminate knocking from the tractor business*

## THE TRACTOR DEALERS SHOULD Take Hold of Tractor Policies

They Should Govern, Guide and Direct All Demonstrations, All Publicity, All Propaganda and Get the Tractor "In Right" with the Farmer

*A Big Job for the National Automobile Dealers' Association*

By H. E. RESSEGUIE

**I**N its present stage the tractor business is comparable to nothing else but a big, over-grown youngster. Almost over night the production of tractors in the United States has been doubled. In 1917 between fifty and sixty thousand tractors were built, while it is estimated that 120,000 or more will be manufactured this year. Tractor production for 1919 will be limited only by the supplies of fuel, steel and labor available to the manufacturers. *Under any circumstances the output cannot hope to equal the demand for some years to come.*

In common with the overgrown youngster, however, the tractor business must be nurtured carefully, else it will become a spoiled child. The tractor has been press-agented not wisely but too well. Under false impressions created by smooth-tongued

salesmen many farmers, whose previous knowledge of automotive affairs has been limited, have purchased tractors with the expectation that they would do everything from fitting up the "back forty" to cleaning the front-room rug. The tractor, like the military tank, has been expected to do the impossible.

The effect of this already has become noticeable on a large scale. England, who had ordered 8000 tractors of a well-known make, recently cut her order to 4000. Canada had ordered 2000 tractors of the same make and immediately cut her order to 1000. So great was the need for tractors in the United States, and so great the faith of the American farmer in the maker of this tractor, that this surplus was immediately snapped up by American distributors, who disposed of them in a jiffy, and returned to beseech the factory for still more.

Like a leaf before the coming gale,

however, this incident serves to illustrate the lay of the land. Will the American tractor dealer be shrewd enough to size up the situation and prepare to meet it?

Coming on the market at a time when the entire nation was straining every energy to increase production in every line, especially in food stuffs, the tractor has been given impetus by the approval of Federal, State and county authorities. Clarence Ousley, assistant secretary of the Department of Agriculture, said in talking about tractors:

"There is a county agent in every one of 2450 of the 2850 agricultural counties of the United States. It is their business to give advice to the farmers. They have helped in introducing tractors. They have even gone to local banks and lent the weight of their recommendation to the banker, telling him that a liberal loan in a given community and to stated persons for the purchase of farm tractors would be a safe and beneficial investment for the community."

Thus the way has been paved for the tractor dealer on a great national scale.



Never in the history of merchandising has the same amount of time, energy and money been expended by a government in opening the door for a commercial enterprise. The tractor is a necessity and its success is assured, but the success or failure of the tractor dealer hinges on whether or not he is big enough to measure up to his opportunity.

#### Have Brought Enthusiasm to the Trade

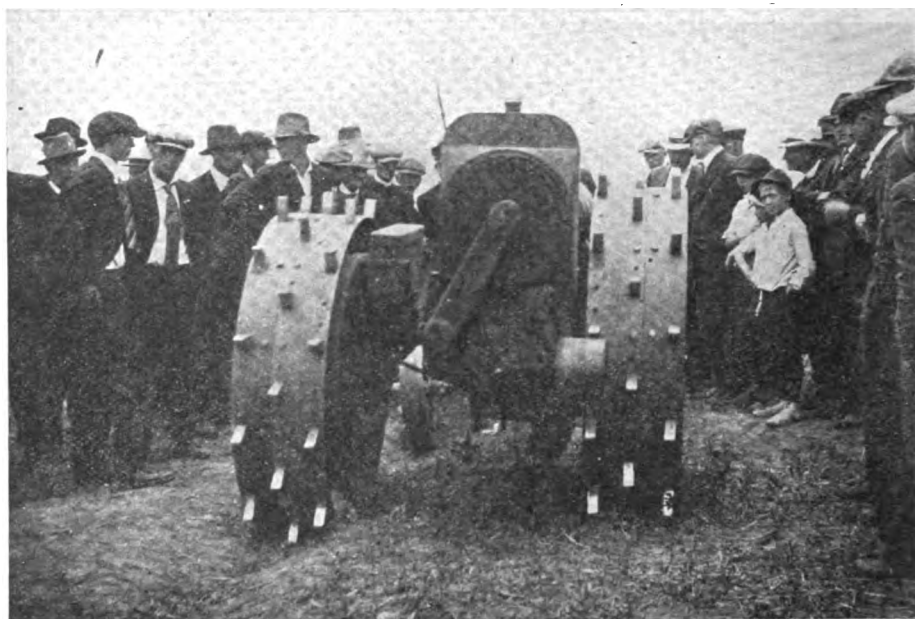
The tractor has been doubly favored by coming on the market at a time when the motor car dealer found himself hampered by a shortage of cars and obliged to turn his energies into other channels in order to keep the balance on the right side of the ledger. Accustomed to doing business on a large scale, these men have brought into the tractor business an enthusiasm that has been a vital factor in whatever degree of success already has been obtained. One thing, at least, that can be laid to their credit is the putting of the business on a cash basis, a thing that the old implement dealer, grown hidebound through long years of barter and dickering with the farmer, would never have been able to accomplish.

It is almost incredible, then, that many of these men, a great number of whom were associated with the motor car business when that industry was also in its swaddling clothes, can be guilty of the same practices that for a time threatened to stifle even that lusty youngster.

#### Experience With Automobile to Serve Tractor Dealer

Through force of circumstances most of these men were driven to realize the elements necessary for successful motor car merchandising. Will those who have become affiliated with the tractor industry profit by their experience thus gained and by efficient organization underwrite the future of the tractor, using their hard-gained experience as capital and taking their premiums in satisfied customers who stay sold, or must the tractor pass through the same phases as the motor car before efficiency in its distribution is reached?

A child who has received some training at home can skip several of the lower grades when sent to school. Why must the tractor, having behind it the most aggressive group of merchants in the



*Enthusiastic crowds watched every operation of the tractors at the New York State Fair*

world, spend tedious years in the kindergarten and primary stages? Gauged by the potential power of the men behind it, it is already prepared for college.

Probably the greatest selling campaigns that the United States has ever witnessed have been the Liberty Loan drives. Perhaps an analytical study of these campaigns would show that the greatest contributing factor to their success is the inherent patriotism of the American people; but there is no question regarding the fact that two other great factors also have played a prominent part in attaining the goal. These two factors are: available to any selling organization; in fact, they are absolutely necessary to a successful one. *They are co-operation and publicity.*

#### Combating the "Knocking" Inclination

Already these things are being taken up on a small scale. Becoming alarmed at the spirit displayed by a number of tractor dealers in knocking competitors' machines instead of boosting their own, while talking at the demonstrations held under the auspices of the New York State Food Commission, E. Gordon Lee, who

is in charge of the distribution of the Fordson in New York State for T. J. Northway of Rochester, has taken every opportunity to combat this spirit, with the result that there exists between the twenty large tractor distributors and their agents in New York State a gentlemen's agreement governing this phase of the situation. There is as yet no New York tractor dealers' association, but this is expected to be the next step in the improvement of conditions. Some of the things to which these men have agreed are as follows:

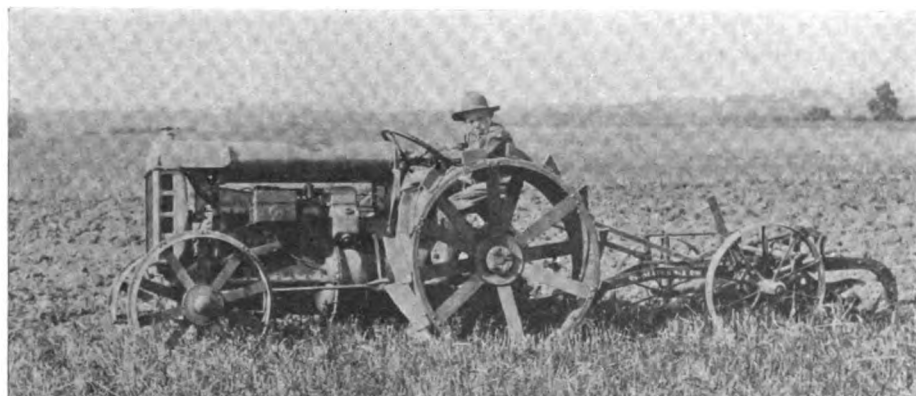
It has been agreed that no tractor distributor in the state shall exhibit except at one of the demonstrations staged by the State Food Commission. This does not prevent the dealer from staging little demonstrations of his own at family reunions, farm bureau picnics, etc., but it does tend to confine the larger demonstrations in the hands of practical men, and to insure that they be conducted in a proper manner.

To this end it has been agreed that any salesman found guilty of knocking another make of tractor during the time allotted to him to address the crowd shall be barred from further participation in the State demonstrations.

#### "Tractor Expert" and "Practical Man"

As far as possible it has been agreed to substitute the words "tractor business" instead of "tractor game," and instead of saying "tractor expert" to use the words "practical man." These may seem unimportant features, but it has been found that their psychological effect upon the farmer is surprising. It is Lee's idea that everything possible should be done to put the tractor business on a dignified footing and to dispel the farmer's illusion that it requires an expert to operate the tractor.

To this end the three "trouble shooters" of the Northway organization were picked from men who already had a thor-



*Meredith Castor of Baldwinsville, N. Y., who plowed 19 acres in three days with a Fordson. He is eleven years of age*

ough knowledge of soil conditions, rotation of crops and general farming. They were then turned loose with a tractor and allowed to solve by themselves any problems that arose. To-day the State has been divided into three zones, one of which is looked after by each of these men. They understand the farmer and the farmer understands them. By furnishing this service to the farmer there is no necessity of any tractor being laid up for repairs longer than a few hours, and unless the men remain several days in one place no charge is made for their service. *This is co-operation.*

It has been found that the demonstrations of the State Food Commission tend to put over the idea of working the farm by mechanical means and also that, as they are also of a semi-official nature, exhibitors are held more closely to the regulations. Briefly, these regulate the depth of plowing to between 7 and 8 inches, and, if an operator consistently plows over or under this depth, he is ruled off the field.

#### Machines Judged by Work Done

The time in which each machine may be explained by the demonstrator, the amount of advertising that may be used, together with the regulations in regard to fuel, are plainly outlined. The object of these demonstrations, as stated by the Food Commission, is to show the farmers the various tractors in action. No record of fuel consumption or time taken to plow will be kept. The machines are judged by the type of work.

About a dozen of these demonstrations will be held at various places throughout the State during 1919, under the same restrictions as governed those of this year, except that it is being planned to make them two and three day demonstrations instead of one day affairs, which will give the farmer a better opportunity to follow the tractor through the different operations connected with fitting a piece of ground.

This is a beginning. The "gentleman's

agreement" may succeed during the coming year in welding these leaders and distributors into a compact organization. The needs of the tractor business might be summed up as follows:

#### Needs of Tractor Business

First, A national organization of tractor dealers—a division of the National Automobile Dealers' Association—who would have jurisdiction over every tractor demonstration held in the country. These demonstrations should be held under a set of standardized rules, drafted in such a manner as to eliminate knocking and unfair competition. Nothing creates distrust of the tractor in general in the mind of the farmer so quickly as to have one demonstrator knock a competitor's machine.

Second, Complete co-operation between factory and distributor, distributor and dealer, and between the dealer and farmer, both individually and through the county, state and national agricultural associations, and between all of these and their various State Food Commissions and departments of agriculture.

Third, A campaign of pitiless publicity through newspapers and other mediums that would acquaint the farmers with the shortcomings of the tractor as well as its good features, and would familiarize them with the efforts being made by the manufacturer to overcome these failings, providing such exist. This would prevent the creation of false impressions regarding the all-powerfulness of the tractor.

For instance, if the tractor will not operate to advantage on a steep side-hill, the farmer who owns a side-hill farm should be acquainted with this fact, which might save him many dollars he could illy afford to lose in experiments and would prevent knocking of tractors in general by users who became dissatisfied through such causes. There are enough prospects operating comparatively level farms to keep the tractor dealer busy

until the manufacturer has further perfected the machine for this work.

This publicity should originate through a central bureau controlled by the dealers' association, and not by the manufacturers, in order that absolute impartiality might be assured.

That publicity of this type is needed is evidenced by the notice printed on the back of the program for the tractor demonstration held at the New York State Fair at Syracuse and signed by Calvin J. Huson, director of the New York State Food Commission, and F. G. Behrends, state superintendent of farm machinery. Part of the field used there for the demonstration was the bed of an old race track and in order that the farmer might not be disappointed with the work done the following was authorized:

#### Judgment Should Be Based on Study of Conditions

"Most things have their limitations, even the modern farm tractor. Don't be hasty in your condemnation. In judging a tractor by its performance consider the soil conditions. Do not merely stand and look on—be interested. Follow the tractor, examine the soil, both surface and sub-soil, check up on the depth of plowing, etc., then pass your judgment. Remember that all of these companies exhibiting knew the conditions prior to entering this demonstration; they knew that they could not do as good work here as on a normal field—but all agreed to enter so that you might see just what could be done under abnormal conditions.

"Watch them here to-day and then come back to-morrow and see them work under more favorable conditions."

The farmer appreciates this being taken into the confidence of the demonstrator. At Syracuse these few printed words bred a great confidence between all parties concerned. Distributed on a national scale the plain truth about the tractor should advance the best interests of farmer, dealer, distributor and manufacturer.

## American Cars in China and Japan

WHILE American cars predominate in China, the future market for motor vehicles in that country depends upon road construction. A report just issued by the Bureau of Foreign and Domestic Commerce, Department of Commerce, says that as a general rule there are no suitable roads to be found outside the foreign concessions of the treaty ports, although there are some 150 miles of streets in Peking.

The feature that should interest American motor car manufacturers, however, is the fact that there is at the present time a desire for roads and a realization on the part of both Chinese officials and foreign residents that highways are essential to the development of the vast resources of the country.

There are only 2700 cars in all of Japan, but the recent prosperity has greatly stimulated the demand and will

for some time result in increased sales. Americans have had most of the business since the war started and seem to have the market for medium and low-priced cars well in hand.

According to Tom O. Jones, author of the Government's report, Hawaii has purchased more cars than China and Japan combined and the prosperity of this American possession makes it an attractive if limited field for the sale of American machines. An interesting feature is the fact that the sugar companies have found it economical to haul the workmen to and from the plantations each day in motor trucks.

In presenting the case for export trade in general, Mr. Jones says that the American manufacturer is coming more and more to appreciate the value of such trade as a great balance wheel, a factor that will allow the factories to carry

on increased production through what are usually called the dull months, namely October to March. Because of climate conditions, the export trade in motor cars is largely a year-round proposition in the Far East and in the Tropics, but in the Southern Hemisphere it is at its height during our winter season. Any influence that may be exerted by rainy seasons is usually such as to relieve the pressure of delivery requirements during what we know as the busy months in American markets.

The report is entitled "Motor Vehicles in Japan, China and Hawaii," Special Agents Series No. 171, and is largely concerned with instructions as to how cars may be sold in the countries considered. Copies can be obtained at 15 cents each from the Superintendent of Documents, Government Printing Office, Washington, D. C.

# Winter Business

*Action Is  
the Surest  
Eraser  
of Red  
Ink*

## Are You Selling Winter Tops?

THE Sam F. Baker Motor Co., Kansas City, sold enough winter tops during the influenza epidemic, in October and November, to make the bank book look like old times.

Those were depressing days. People were not going outdoors any more than they had to; shopping hours were restricted, there was a ban on gatherings of all kinds, including theaters. Papers were full of cautions against taking cold, or neglecting a cold, or exposing oneself to contagion. Business was rotten.

Therefore—the Sam F. Baker Motor Co. got busy. George Hamilton Stone, treasurer, who is running the business while Baker is helping the army in Europe, hustled to get out the first number of "The Ford Student," a house organ for Ford owners in Kansas City. The back page was given over to a display advertisement of the winter top—and of the phrase:

"We will make a sedan of your car for \$85."

And simultaneously, newspaper space was used for this same product. But the big line in the newspaper ad certainly hit the spot, struck the influenza-scared people of Kansas City where they were then most concerned. It was:

"\$85 or your life."

There was no reference to influenza—not at all.

Stone was not so thoughtless as to confine the utility of the winter top to the prevention of contagion during the epidemic!

The advertisement intimated that the cold, rainy, health-attacking days of winter were coming—and a winter top would keep the body warm and comfortable—besides making the touring car look like a sedan, and the roadster look like a coupelet.

Anybody that wanted to could see that the rainy, cold days of October, while influenza germs were flying around, needed protection against just as much as December days.

The Baker establishment didn't feel the

depression that other merchants noted in October and November. Possibly this establishment got considerable money

that might have been spent elsewhere had others conceived as timely a campaign as he did.

1918-1919
WINTER
No. 12

## BULLETIN D'HIVER

LA CIE RENAUD D'ACCESSOIRES D'AUTOMOBILES  
326 STE-CATHERINE EST

**THE RENAUD MOTOR SUPPLY CO.**  
MONTREAL, CAN.



This Bulletin is compiled to convey to dealers and motorists helpful suggestions which will make Winter driving enjoyable and also facilitate the selection of necessary accessories for Winter repairs.

Ce Bulletin est publié dans l'intérêt des propriétaires de garages et automobilistes afin de faire connaître les détails nécessaires pour le bon fonctionnement d'une machine durant l'hiver et aussi pour faciliter le choix des fournitures nécessaires à la réparation.

## How a Jobber Boosts Winter Business

*The Renaud Motor Supply Co., Montreal, has issued for two seasons a Winter Bulletin which it mails out to the entire trade in Eastern Canada. It also goes to motorists and the results are said to be highly beneficial. The bulletin is printed in both English and French, and the title is nicely worked in in both languages. "Winter Bulletin" and "Bulletin d'Hiver" mean the same*

# Sell Oil This Winter

## Here Are Several Suggestions as to How to Do It

**C**ERTAINLY it can be done. You have been selling a little oil now and then and when the customer asked for it. How are you going to make him ask for more?

Do you ask every customer who buys gasoline whether he needs oil?

Do you check up the cars that are left at your garage and notify the owners in the morning if the oil supply is low, or do you let them go out on the road and buy the oil somewhere else when they find out that they are short?

Did you ever approach a customer on the proposition of buying 5 or 10 gals. or perhaps a drum?

Do you have any convenient means of dispensing oil if the customer looks a little dubious and says, "Yes, I do need some, but I'm in a hurry."

Here are some things you can do to increase your oil sales:

1—Solicit oil sales from every patron, transient or permanent. Tackle them every time they buy gasoline. Sell them enough to bring the oil level up to the required height in the engine anyway. Try to sell them a gallon.

2—Boost the sale of oil in 5- or 10-gal. cans or in drums of 30 or 50 gal. if they

house their cars in their own garages. Impress upon them the fact that it is cheaper to buy oil this way, that they will always have a supply of good oil on hand and that it is easy, safe and economical to buy it this way. Show them how they can set the drums up on trestles or frames and screw in a spigot.

3—Get after the tractor owners. Here is a big field for oil sales. Every tractor will use at least 1½ bbl. of oil in a season. Sell this oil by the drum and fill the customer's oil requirements for the year at one shot. This protects you against the oil peddler and insures against the owner buying any other kind of oil till his stock runs out, then sell him again.

4—Selling wholesale in this way means that you will not have to give a sales talk every time you sell a gallon of oil. Consequently you can turn your energies in other directions.

5—Give crankcase service. This means cleaning out the crankcase and refilling with fresh oil periodically. Once a month is a good average. Keep a card index of the customers who avail themselves of this service and if they do not come in on time, call them on the telephone or write them. Make a charge for the service and charge for the oil. If necessary to introduce the service or to introduce the brand of oil, give the service free and charge for the oil. You might make a stipulation that the service is free with the sale of a certain quantity of oil which may be taken at once, or put into the car as required. This brings the cars to the garage and gives a chance to talk other sales.

6—Have your storage tags made like the one shown in the illustration. Whenever a car comes in for storage or repairs, check up the amount of gasoline and oil and estimate how much of these two articles are needed for the car and fill in the tag accordingly. Show this to the customer in the morning. A surprising number of patrons will buy. If you don't do this you are letting profits slip by you.

7—Tear off the upper part of the tag and file it in a box, arranging the names alphabetically, or by towns in your neighborhood. Use these names for circularizing from time to time for crankcase service or for the sale of oil in cans or drums. Start a campaign every once in a while and send each one of these names a letter once a week for six weeks. Enclose oil literature with every letter.

8—Use your telephone. You can often get an audience with a customer over the telephone, when it is difficult to get him any other way.

9—Display your oil. Put it in the window and have some kind of display rack or stand inside the garage. One of these

racks that was labeled with the make of car and part that each can was intended for sold over 30 gal. of oil in one day. There was no salesman there either. The customers went up, picked out the can that the sign said was suitable for their cars and paid for it. How many could have been sold if a man had been available to urge some of the others who did not buy?

10—Get acquainted with tractor lubrication. Tractors using kerosene require frequent draining of the crankcase, as some of the kerosene does not vaporize but gets down past the rings into the crankcase and thins out the oil so that it is useless as a lubricant. Every time the case is drained means fresh oil. You want to be the man to supply that oil. Study the tractor lubrication problem and advise the customer before he has a set of bearings burned out.

11—Look up tractor nameplates and instruction books and find out if any particular grade or kind of oil is recommended by the tractor manufacturer. If so, make a note of it and see that you carry some of this oil, and inform the tractor owner that you are on the job with the best oil for his tractor.

12—Farm machinery needs oil. If you are selling oil to a farmer for his tractor, get his farm machinery business, also.

13—Install a curb pump or container near the gasoline pump so that you can get oil into a car as quickly as you can gasoline.

14—Get away from the old dusty, greasy quart measure that is in such universal use. It is a time waster and produces a bad effect on the customer's mind.

### Sell Used Cars

KANSAS CITY, Nov. 29—"The best thing that could happen to the dealer would be for him to get busy on sales of used cars," said G. T. O'Maley, Ford dealer. "There will be a big demand for new cars ultimately—and probably a big supply. Any effort now on used cars would perform a two-fold function. First, it would get the dealer ready with his organization and his lists of prospects, get his publicity lines laid for the time when new cars are available and the demand rises. Second, it would get the used cars out of the way, so that the used-car question would be greatly simplified."

O'Maley is one dealer who handles used cars on consignment only—and he hopes to see the time when all dealers receive used cars into their establishments exclusively on this basis. This period of a month or so, December, January and February perhaps, he considers the critical opportunity, during which the ground can be prepared for such a change in the used car status.

*Send us your show dates  
for Motor World Calendar  
of Coming Events.*

No. 5503	
Name .....	.....
Address .....	.....
Car .....	.....
License .....	.....
Date .....	.....
<b>YOUR CAR NEEDS</b>	
Gasoline .....	gals.
Oil .....	qts.
Water—We filled your radiator.	
<b>CHARGES</b>	
Storage .....	\$ .....
Clean .....	\$ .....
Polish .....	\$ .....
Repairs .....	\$ .....
Supplies .....	\$ .....
Total .....	\$ .....
Claim Check No. 5503	
ELVIDGE GARAGE, POMONA, N. Y.	

Read Paragraph 6 on this page and learn how this tag is used

# Get Off the Cracker Barrel

BY RAY W. SHERMAN

"IF we could get back all the men we had two years ago we would have a bang-up service organization," said Henry Bennett, Redman distributor, as he talked from the corner of the desk of Reilly, Sennett distributor and Henry's boyhood friend.

"You did have some good boys."

"We sure did!" Henry admitted. "We had some birds. Since they went we have picked up a few good ones but have also accumulated some poor ones, and if I could get back all the old ones it would make a wonderful lay-out."

"Some of them went in the army, but a lot of them left before the war started and got good jobs in munitions factories. I couldn't blame them. I couldn't offer them any money and told them they had better jump and clean up while the cleaning was good—and they did."

"I'll say they did," Reilly agreed. "So did mine."

"And then the war came along and affected business and a lot of things happened. I can remember when things used to be a lot different. We used to sell more cars than we could get. Say, Reilly! I sold cars with a premium on position in the waiting list once. Those were the good old days. But——"

"Henry," coolly declared Reilly, "get off the cracker barrel."

"Cracker barrel? Cracker barrel? Whatdoyuhmean—cracker barrel?"

"You're reminiscing. You're reciting ancient history. You're looking backward. You're sitting on a corner grocery cracker barrel talking about the days that used to be. Wake up. The war's over. Forget the old stuff and begin to think of the days ahead rather than those behind."

"Can't I talk of the old days if I want to?" Henry demanded.

"You seem to be qualified," was the sarcastic retort. "But a cracker barrel is not a good vantage point for looking forward. It's no place for a young man who expects to get anywhere."

"Well—maybe——," Henry began, but Reilly interrupted.

"No maybe about it!" and the Sennett dealer slapped his hand on the desk. "It's sound dope! There are going to be a lot of cracker-barrel boys in this business during the next few years, and they'll stay with us until the barrels break down. They'll sit and sit and sit and tell of the days that used to be, but they'll never get squared away for a clean-up in the days that are going to come."

Henry said never a word.

"This is the one big chance for all of us," Reilly continued, "but we can't cash in if we try to do it from the top of a

## Pitchers

"I've always thought baseball the greatest of games,"

Said fussy old Jason McJones.

"It's fast and it's clean and makes the wits keen

And keeps all the fat off your bones.

I always liked baseball when I was a kid

And pitched for my high school and college.

Few pitchers to-day have what I could display—

With all of their major league knowledge."

"I, too, was a twirler when I was a youth,"

Said skinny old Hiram T. Skinner.

"I went to the top, and to tell you the truth,

I'd sooner pitch ball than eat dinner.

They dreaded my speed, if I say it myself,

And bit on my curve when I threw it.

The fans used to say when I started to play:

'Here comes the old boy that can do it!'"

If all the old codgers have stuck to the truth

Like the honest young wife of J. Caesar,

The men who played shortstop or "first" in their youth

Are very much scarcer than fleas are.

But youth's golden days are enveloped in haze

When life creeps along to December,

So bless the old boys! Let 'em tell of the joys

And the triumphs they think they remember.

—William F. Kirk in the New York Evening Journal.

cracker barrel. The old stuff has gone—far, far back into the fog—and new days are here. They are fat with opportunity, but they're going to require some looking forward and some quick and intense action.

"Instead of cracker-barreling about the service organization you used to have you might better begin to get a bang-up organization together for the business you can get if you go after it. Some of your old men will come back. How many you can't tell unless you investigate a bit and find out. You're going to need a certain number of men, so why don't you find where all your old men are and see how many of the ones you want are willing to come back?"

"Then, when you find how many you can get—and when—piece things to-

gether and see how many more you'll need. You'll need a few, certainly, so where are you going to get them? You should always be training a few likely lads in your shop."

"I think I'll do that, but, you see——"

"And your sales, your income, your dealer organization, and all the rest of it. What about those things? Time was when, as you say, you had people paying you more than the list price if you would permit them to buy a car from you. That's old stuff. It doesn't make you any money this year. What you've got to do is find out how to make money next year, not last year!"

"You took on a truck, a tractor and a farm light plant, but you admit they haven't gone as well as you hoped they would. What are you going to do about it? Are you going to sit on a cracker barrel and dream of the days when things blew your way, or are you going to dig in and find out how you can boost your income with your present layout?"

"There was a time when any of us could make money in spite of ourselves. We didn't even need to keep any books—except a bank book. But those days are gone."

"There was also a time when mechanics could sell cars, when a salesman could ramble along in his old-rut way and the prospect would buy the car in spite of the salesman. But those days are no more."

"There was a time when a distributor could go out and get a dealer and forget about him thereafter until it came time to collect money from him, but those days, too, are gone, Henry."

"I know fellows in this business who still smile and look wise whenever any one talks of making money in the used-car business. They are considered by some folks—and by themselves—as the solid old rocks of trade. They think the things they do are right because they have always done them. They think money can't be made in used cars because they never made it. They think it's useless to figure repairwork on a real cost basis—because they never did it. They think the teaching of salesmen along intensive lines is tommyrot, because it wasn't done in the old school."

"All of that stuff went once, Henry, but it doesn't go any more. Some of the solid rocks of trade are going to become bad credit risks within the next few years if they don't get off the cracker barrels. No man, no business, no nation can become so firmly entrenched that it can't be overthrown if it ceases to fight for its position."

"When a man once gets on a cracker barrel and begins to talk of what he used to do he is about through doing."



# Scientific Construction

## GARAGES—REPAIRSHOPS—SHOWROOMS

If we can help you, write

### Garage Without Posts

Editor Motor World: I own a lot 50 x 106 ft. on Communipaw Avenue, which is 110 ft. west of the Hudson County Boulevard and facing north and south. I would like to put up a building without posts to be used as garage and first class machine shop.

I am writing to ask if you will kindly help me with a set of plans and approximate costs. A small showroom in front, the shop as large as possible, and also space to keep a few cars. I would like to have the place as attractive as possible, as there are several garages and showrooms in the immediate vicinity.

Which material is the cheapest at the present time, brick, cement blocks or tile? If possible, have the costs include the plumbing and electric wiring and heating.—F. Sagot, 238 Grand Avenue, Jersey City, N. J.

### Building Costs Vary

Enclosed is a plan for the building you are contemplating.

We were unable to draw the shop in detail, as we do not know just what you want in the way of equipment.

We are very sorry but it is impossible to give you figures on building costs. So much depends on the materials used, the local labor market and a thousand and one things that it is impossible to make an accurate estimate without going into great detail.

Our purpose in drawing plans for our readers is simply to aid them in obtaining the most efficient layout possible, as we have found that architects know so little about the merchandising of cars and accessories and the operation of a garage and shop that as a rule their plans are not as satisfactory as might be expected.

### Three Heating Plans

Editor Motor World: We have a garage building 119 ft. long, 54 ft. wide. Our workshop is on the second floor. Won't you please suggest some economical way of heating the entire building? Is there some sort of gasoline heaters manufactured? Your suggestions will be greatly appreciated.—Billeaud Motor Co.

Answer—Gasoline is too expensive for use in heating a large building. It is employed to some extent for cooling and lighting but not for heating.

Kerosene garage heaters are obtainable, although it is questionable whether they are best for your purpose. The writer is not particularly familiar with

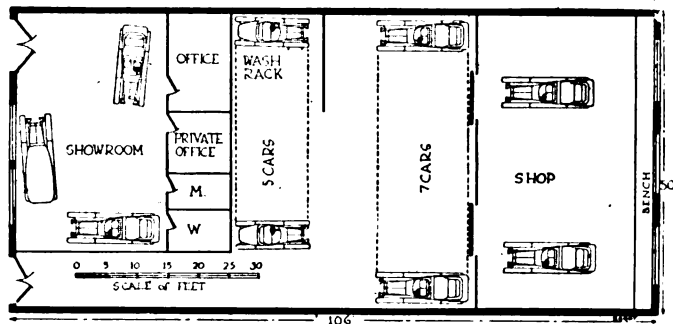
the climate in your territory, but if you desire heating apparatus simply to fortify you against an occasional mild cold snap perhaps kerosene heaters will fill the bill most satisfactorily.

We are almost certain, however, that you will be best satisfied with furnace heat. We suggest as the cheapest for installation a hot air furnace with practically no piping, hot air circulation being entirely dependent on the thermosiphon principle.

Referring to suggestion No. 1, herewith, hot air is delivered from the top of the furnace through pipes to the second floor. The continued upward flow of air from the furnace forces the air in the direction of the arrows until it reaches the far end of the building, whence it sinks through the large opening, which may be a stairway or an elevator shaft, and this returns to the furnace.

The success of the system depends on keeping all other openings between the two floors closed and also all doors, windows, transoms and ventilators. Necessary fresh air can be obtained by temporarily suspending the operation of the system and opening as many windows and doors as required.

Suggestion No. 2 offers better circulation, inasmuch as the length of pipe the air has to travel from the furnace and back to it again is practically cut in half. Only one hot air pipe is shown running from the top of the furnace. Actually, however, pipes should lead from every available opening in the top of the furnace to the second floor, roughly as shown in Fig. 3.



This is a good plan for a small showroom and garage with a fair sized repairshop

### Merchandising Parts

HARTFORD, Nov. 28—From a merchandising standpoint two notable changes have been made by Hartford concerns. The Elmer Automobile Co., distributor in northern Connecticut for the Ford and for the Chevrolet in smaller towns has gone in for window displays, which is rather a departure. A full-fledged store and basement formerly occupied by Charles E. Miller is now used for a stock department. Displays of Ford parts are large in the spacious show window and the parts are shown in such variety as to suggest to the buyer something else that he requires. For instance, the buyer may need a wheel bearing and when he looks at the window he sees radiator hose and other parts. Or he may need a new spring, bushings or small nuts and bolts.

Brown, Thomas & Co., Cadillac distributors, have never gone in very extensively for accessories. This concern has just put in long, low bright show cases and all manner of equipment is carefully and intelligently displayed. In this case the display speaks for itself. The suggestions offered by the show cases mean more business than heretofore.

### Reilly Hit the Spot

Editor Motor World: We consider the Reilly story on "Stealing the Buyer's Time" one of the best talks on salesmanship we have ever read.—Eau Claire Sweat Pad Co., Eau Claire, Wis.

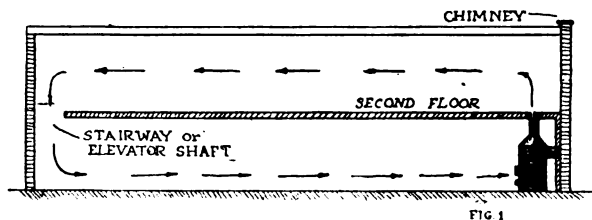


FIG 1

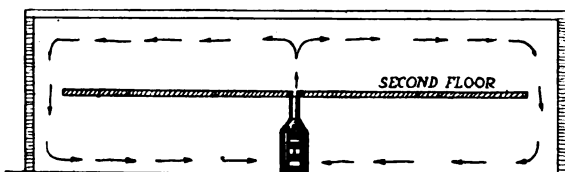


FIG 2

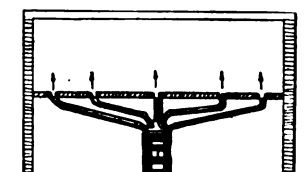


FIG 3

Heating a large building with hot air is not always satisfactory. But here are three methods that can be tried, and which in many cases have worked out quite well

*A Department of*

# BETTER MECHANICS

No. 90

## Adjustments on the Franklin Series Nine Running Gear

### Front Axle Assembly

- 1—Jack up the front wheel.
- 2—Remove the hub cap.
- 3—Remove the cotter pin from the wheel spindle.
- 4—Remove the adjusting nut.
- 5—Remove the washer.
- 6—Pull the wheel off with a wheel puller.
- 7—If the wheels squeak when the car turns a corner, tighten the hub-flange bolts.
- 8—Wash all the bearings and parts with kerosene.
- 9—Repack with cup grease.
- 10—Replace the bearings.
- 11—Replace the wheel.
- 12—Replace the washer.
- 13—Screw on the adjusting nut.
- 14—Set the adjusting nut so that there is a slight rock or play. They should not be tight.
- 15—Replace the cotter pin and spread the ends.
- 16—Replace the hub cap.

### Steering Connections

Wear or looseness in the steering connections will sometimes result in a wobble at the front end of the car. There is a spring in each of the steering connection ball and socket joints, and this is to take up wear, not to absorb shocks.

- 1—Remove the cotter pin that holds the steering connection adjusting screw.
- 2—Turn this adjusting screw till there is a spring pressure between 300 and 450 lb. One full turn of the adjusting nut applies a pressure of about 150 lb.
- 3—If the adjusting nut bottoms before the requisite pressure is attained place a ¼-in. spacer back of the spring.

By J. HOWARD PILE

Note—On cars numbered 11,700 and under one of the springs is on the inside of the ball and the other on the outside, consequently changing the spring tension will affect the wheel alignment. On cars over 11,700 the spring is on the outside of the ball on both ends of the knuckle connecting rod and drag link. Changing the spring tension will therefore not affect the wheel alignment on the later models.

- 4—Insert the cotter pin and spread the ends.
- 5—Tighten the lock nuts on the steering connections.
- 6—Wear between the steering yoke and knuckle is taken up by putting a thin

shim under the bottom of the steering knuckle.

7—The clearance between the steering knuckle pins and bushings should be .005 to .008 in. This makes a perceptible looseness of the pins in the bushings, but a closer fit than this will cause stiff steering.

### Alignment of Front Wheels

- 1—Jack up both front wheels.
- 2—Spin them around one at a time.
- 3—Hold a pencil or piece of chalk to the tire treads so as to make single lines.
- 4—Adjust the steering tie-rod so that the distance between these lines is from 0 to ¼ in. less in front than in back. Take the measurements at points level with the wheel hubs.
- 5—The camber of the front wheels

should be such that the lower edge of the tire rim will be 5/32 in. inside of the top edge of the rim.

6—To test this lay a straight edge across the top of the tire and suspend a plumb bob on a string.

7—Measure in from the string to the rim at top and at bottom, the bottom measurement being 5/32 in. greater than the top if the wheels have the correct camber.

### Rear Axle Assembly

1—To tighten the pinion shaft packing loosen the lock C (Fig. 5) and screw in the retainer B till the packing fits snugly around the shaft.

2—To replace the packing it is necessary to disconnect the drive line and remove the universal joint flange. This is done by taking out the bolts that hold the halves of the flange together, removing the cotter pin and nut from

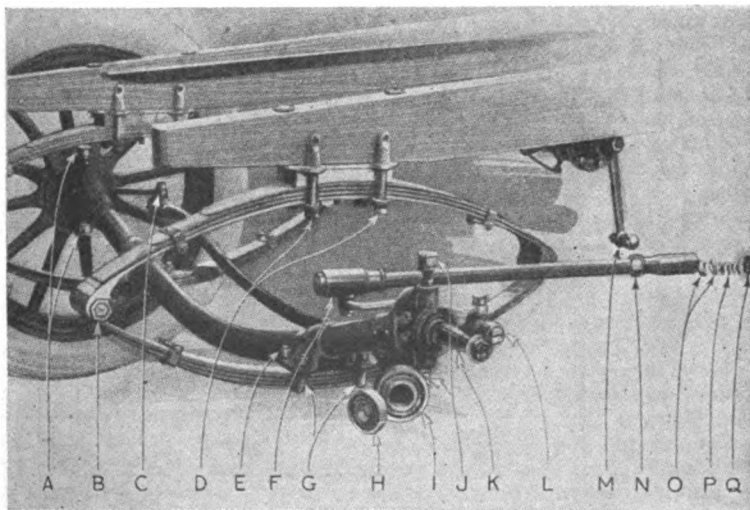


Fig. 1—Franklin front axle. A—Grease cups for steering yoke pins. B—Spring pivot bolt. C—Steering connection. D—Upper spring-clip nuts. E—Lower spring-clip nuts. F—Steering connection. G—Lower spring clips. H—Outside thrust bearing. I—Inside thrust bearing. J—Grease cups for steering yoke pins. K—Steering knuckle. L—Steering connection. M—Steering-gear arm. N—Drag-link lock-nut. O—Bearing cups for ball connection. P—Steering connection spring. Q—Steering-connection adjusting screw

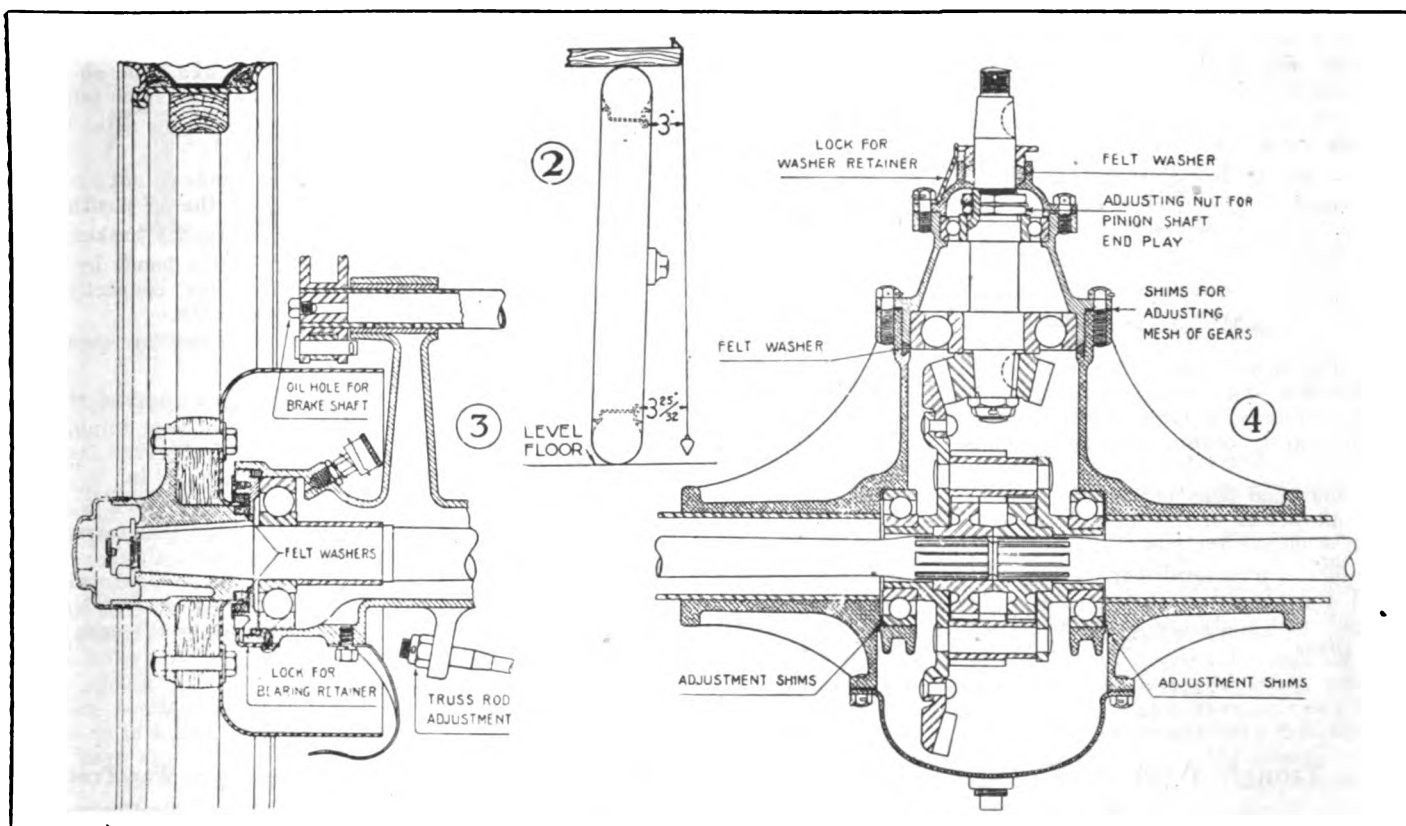


Fig. 2—Measuring the camber of the front wheels. Fig. 3—Section through the wheel to show the felt washers.

Fig. 4—Adjustment of the gear mesh is by means of shims which hold the gear in correct position

the end of the shaft in the flange and drawing the flange off.

#### Driveshaft Felt Washer

- 1—Remove the wheel.
- 2—Replace the felt washer on the inside of the wheel hub.
- 3—The retainer that holds the other felt washer into the end of the axle housing is taken out by removing the three small screws. If this washer shows wear it should be replaced.

#### Driveshaft

- 1—Bearings for the rear-axle drive-shaft should be adjusted so that there is a very slight rock or play. The fact

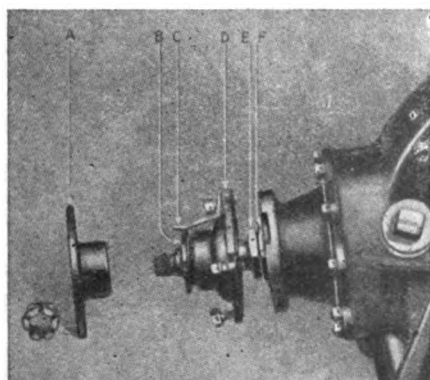


Fig. 5—Adjusting the rear axle. A—Universal-joint flange. B—Retainer for felt oil retainer. C—Lock for B. D—Housing for felt oil retainer. E—Locknut for F. F—Adjusting nut for pinion shaft end play

that this rock is perceptible is not necessarily an indication that the wheels are too loose.

- 2—To adjust the bearings, set the retainers up tight, then loosen two notches each.

3—See that each drive-shaft extends the same distance from the housing. Take the measurements from the faces of the bearings to the ends of the axle housing.

- 4—Screw the bearing retainer locking device tightly back in place.

#### Bevel Drive Gear and Pinion

The bevel gears are positively adjusted by shims. There are no screw adjustments excepting the one that takes up the bearing wear on the pinion shaft.

- 1—To mesh the pinion deeper into the bevel drive gear withdraw the pinion unit.

2—Remove one of the thin shims between the pinion housing and the rear-axle housing.

The meshing of the gear and pinion may be inspected through the large plug hole in the left front side of the gear case.

- 3—The edges of the gear teeth should be approximately flush.

4—To move the bevel gear sideways take out the axle shafts and the bevel gear unit.

- 5—Shim the unit in the necessary direction.

6—Bearing wear can be taken up by inserting additional thin shims.

7—If there is end play in the pinion shaft caused by worn bearings in the drive pinion unit:

- 8—Disconnect the rear universal joint.

- 9—Take off the flange.

10—Remove the housing.

11—Loosen the lock nut.

- 12—Make the adjustment with the adjustment nut F in Fig. 5.

Note—These bearings are very sensitive to adjustment and must not be made too tight. The adjustment is sometimes more easily made if the pinion unit is taken out and put in a vise.

#### Brake Adjustments

- 1—To tighten the service brake, turn the large wing nut on the drum just back of the gear set. This should be tightened till the wheels lock when the pedal is 2 in. from the toe board. See that the band does not drag when the pedal is released.

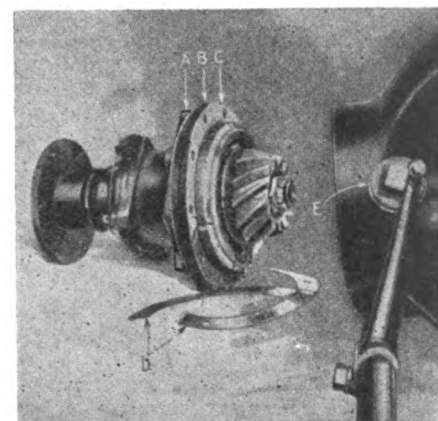


Fig. 6—Bevel-drive pinion adjustment. A—Bevel pinion housing. B, C and D—Adjustment shims. E—Inspection hole

2—If the brake chatters when applied examine the lining for excessive wear.

3—If not badly worn, apply flake graphite or neatsfoot oil.

4—To reline the band remove the adjusting wing nut.

5—Remove the adjusting bolt spring.

6—Remove the Corbin pin that connects the brake band with the brake link.

7—Remove the old lining and rivets.

8—Replace with new lining which is copper-wire woven asbestos, 3/16 x 3 x 23 7/8 in.

9—Put in new rivets. This will require 15 No. 9 x 3/8-in. and 1 1/4 x 5/8-in. flat head, countersunk rivets. The lining is to be slightly countersunk before riveting.

If the band does not fit the drum so that all points of the lining touch the drum when the brake is applied:

1—Place a screwdriver between the band and the drum at the point where it binds and apply the brake firmly several times.

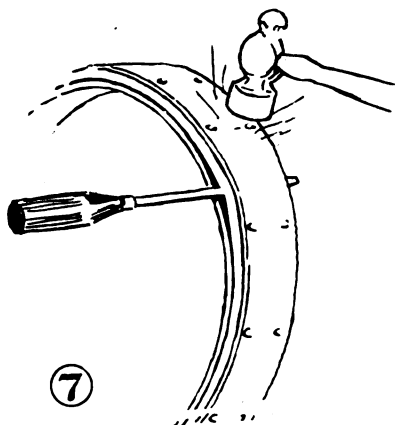


Fig. 7—Reforming the band to fit the drum

2—If this does not remedy the trouble, the band can be bent by tapping it with a hammer while the screwdriver is in this position and the brake is applied.

To tighten the emergency brakes:

1—Jack up both rear wheels.

2—Set the hand-brake lever up 8 notches.

3—Adjust each brake band so that it grips the wheel with the same tension.

4—Tighten the lock nuts after the adjustment is correct.

5—See that the bands do not bind when the hand lever is in the off position.

To reline the emergency brakes:

1—Remove the brake bands by taking out both Corbin pins connecting the bands to the brake links.

2—It is not necessary to remove the wheels.

3—Remove the old lining and rivets.

4—Attach a piece of new lining, which should be copper-wire woven asbestos, each piece 5/32 x 2 3/4 x 28 in.

5—Copper rivets, 16 No. 9 x 3/8 in. and 2 1/4 x 5/8 in. flat head countersunk are used to attach the new lining.

6—If the band does not conform to the drum, form it with a screwdriver and hammer the same as in the case of the service band.

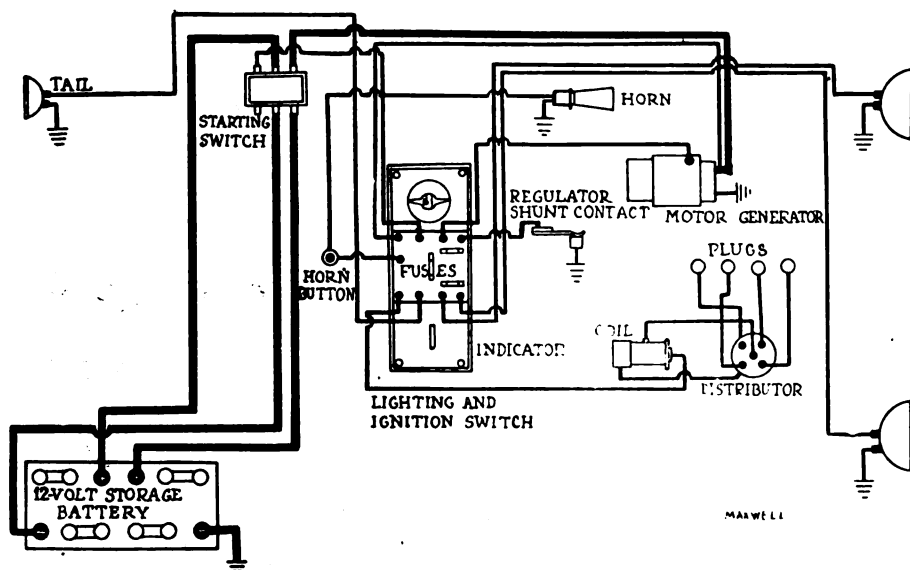
## Has Trouble With the Cutout

Editor Motor World: Will you please furnish a wiring plan for the 1917 Maxwell car. The cut-out will not operate properly and I would like to overcome the trouble by making another installation. Can you tell me how to do this and what kind to get?—George W. Lane, Hollidaysburg, Pa.

Reply—The wiring diagram is gladly given. We would not advise you to make any change in the cut-out. Your trouble is either in the improper adjustment of the cut-out, driving with the regulator button in the wrong position or some defect in the cut-out that should be repaired by the manufacturer. If the cut-out points stick, the ammeter pointer will go to the limit of the scale on the discharge side, and in such case the charging wire and the field wire from the generator should be immediately disconnected

and wrapped with tape until the trouble with the points is remedied. This wrapping is to prevent short circuiting the battery.

If the regulator is not working properly a very high charging current will be shown on the ammeter. This regulator controls the amount of charging current from the generator to the battery, regardless of engine speed. The regulator switch on the panel has two marks, "High" and "Low." The high position should be used for all ordinary driving at low and moderate speeds and the low position should be used where the car maintains a high speed for a considerable length of time. If you are not using this switch the way it is intended to be used your trouble may be here. If you will give us more details as to how the cut-out fails to give service, we may be able to give you additional aid.—Editor.



## Fuller Investigates War Trucks

BOSTON, Nov. 30—Congressman Alvan T. Fuller, distributor of Packard cars and trucks in eastern New England, sailed last week for Europe on a two months' trip to investigate motor conditions abroad for the Government. He will visit all the countries there and learn at first hand what disposition is being made of motor trucks and cars by the war departments of Europe, and the problem of disposing of the thousands of vehicles overseas owned by the United States Government.

In France alone the United States has thousands of trucks, hundreds of motor cars and ambulances, many of which will not be needed by the Government on this side of the water. The question will arise as to whether or not it will be worth while to transport them back or try to sell them in Europe. The other nations now are well equipped with motor vehicles, many of them being from this country, so that they would not need all the machines belonging to our forces. But a lot of them could be used in the reconstruction work.

Congressman Fuller will look over the big truck stations carefully and learn at first hand the general condition of the majority of the machines. Some of them are badly in need of repairs and replacements, no doubt, and whether or not they will be worth bringing back will be a question only an expert like Fuller can determine.

Before sailing Fuller stated that he had made a suggestion to the War Department officials at Washington that the trucks could be turned over to the Post Office Department for the development of parcel post deliveries, which are growing largely now. Also other Government departments could find use for more of them.

# THE LAW

By George F. Kaiser

*As It Applies to*  
Dealers  
Repairmen  
Garagemen

## Not Responsible Under Colorado Law

Editor Motor World: In case of a used car being sold part down and part deferred payments and a mortgage being given covering the deferred payments, who owns the car?

According to the wording of the mortgage, the car is practically deeded back to the seller. If this is so and the mortgagor should take the car out and meet with an accident in which one or two people were killed, would the people injured have any action against the mortgagee?—W. W. Barnett, Denver, Col.

Answer—The Colorado law provides that bills of sales, deeds of trust, etc., where they are given as security for an indebtedness shall be considered to be chattel mortgages. It does not matter, therefore, just what form the instrument you mention is in as it will be considered to be a chattel mortgage.

I know of no provision in the Colorado law which makes a motor car owner responsible for damages caused by a person not in his service or under his control while driving a car owned by him. I should therefore say the party holding the mortgage would not be responsible under the Colorado law.

## Red Cross and State Should Be Appealed To

Editor Motor World: The writer has been a subscriber to Motor World for several years and has benefited greatly from it.

I now have a problem I would like to have your opinion on. Last August we had an auto-bus smashed up in a collision with a telegraph pole, the bus being loaded with soldiers of the New York State Guards who were encamped for a week in our city during the county fair.

Our bus was standing on the street before leaving on its regular run when a captain of the guards came up and ordered our driver to take a load of soldiers to a fire about two miles outside the city, in the opposite direction from our route. Our driver when ordered by this man in officer's uniform thought he must obey and drove to the armory where about 35 soldiers crowded inside, outside and on top of the bus, which is only a 16-passenger capacity. While en route a Red Cross ambulance which was

## The Purpose

of this department is to help our readers smooth out the legal kinks that now and then cause them confusion in their business. What legal knots are you trying to untangle? Mail them to us. We will be glad to help you. In sending queries be sure to include copies of contracts and notes to which you refer.—

EDITOR.

a part of the guard contingent swung out of an intersecting street at about the same time our bus was coming along the main street and our driver in order to avert a collision with the ambulance swung out to the left and was forced out so that he came head on into a telegraph pole, smashing our bus very badly, in fact so badly that it will not pay us to repair same.

The writer would like to know if the state would be liable for the damages incurred and what procedure would you advise.—Hornell-Allegany Transportation Company, Hornell, N. Y.

Answer—There are many things to be considered in answering a question of this kind, and an attorney cannot in justice to himself attempt to answer a question in a case of this character without having all the facts before him.

There are two parties here to whom you might look for compensation, first the state whose agent commandeered your bus, and second the Red Cross whose vehicle caused the accident. My suggestion is to put your claim up to both of them through your local attorney. My opinion is, that if there was no negligence on your driver's part the Red Cross is responsible. If it is not responsible the State may be liable on the theory that your driver was the State's agent at the time of the accident.

## Question of Fitness of Truck for Particular Business

When a motor truck is bought under a written contract which contains no express warranty or representation as to its fitness for use in a particular business the dealer need only furnish a truck with

its parts properly constructed and assembled, is the decision of the court in a recent case.

The owner of a trucking business in Portland ordered a three-ton 1912 truck from a dealer under a written contract. It was provided that the truck was to have demountable rims, gas head lights and a body with adjustable sides, and that the buyer was to pay \$3400 for it, and that it was to remain the dealer's property until it was fully paid for.

There were no specifications attached to the contract and there was no express representation or warranty that the contract would be fit for the owners particular business. The contract contained a clause reading: \

"Note—No verbal agreement or promise not specified in this order will be recognized."

The truck was accepted by the buyer, and after it had been used a while the buyer claimed it worked improperly and was not suitable for his business. When the payments under the contract were not properly made the dealer foreclosed and recovered possession of the truck. About two years later the buyer brought suit to get back the money he had paid under the agreement claiming that there had been a breach of an implied warranty, that the truck was to be suitable for use in his business.

The court said in holding he was not entitled to the recovery of the money:

"Rules of law governing warranties accompanying the sale of manufactured articles are well settled in this state, and the rights of the parties are clearly defined."

The buyer here was not a manufacturer to whom application had been made for the construction of a particular machine for a specified and designated purpose. but he was a dealer in machines of a standard type manufactured by others. Under the contract he was bound to supply a certain described and definite type of truck well known in the general market. Of course it must be of that pattern with its parts properly constructed and assembled so as to meet the requirements of a merchantable and marketable machine. Further from that he was not bound. The contract carried with it no guaranty or warranty or representation of suitability, nor of adaptability to the buyer's business. The buyer has made his own selection as to type and responsibility, for the wisdom of the choice rested on him, not on the dealer. (Flaherty vs. Maine Motor Carriage Co., 104 Atl. 627.)



# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1618—SLEIGH BELL GONG

A sleigh bell gong makes a good substitute for the ordinary type of gong when the sound of the latter too closely resembles some other electric bell nearby. The sleigh bell is simply placed in position and the clapper is bent so that it will strike the bell.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1619—IMPROVED SHOP CARD HOLDER

This shop card holder follows the usual construction in that it is made of celluloid and bound with imitation leather, but differs from others in that it has a long opening running the length of the right side of the card, paralleling which is a strip of imitation leather to be gripped by soiled hands, and it is reversible. The holder is attached to the car by a snap fastener. The advantage in the long open slot is that it enables the workman to sign his name without removing the card from the holder. Each line on the card calls for a particular operation, such as valve grinding, and after it is completed he signs at the end of this line.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1620—REPAIRMAN'S TOOL TRAY

This tray has three compartments and is large enough to hold all the tools a mechanic usually requires in working around a car. It is simple to make, is easily carried, may be set down anywhere and yet it can hold all the necessary tools, thus saving the mechanic many steps, for the need for running back and forth from car to tool drawer is eliminated.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1621—CLUTCH-SPRING TOOL FOR BUICKS

A tool to depress the clutch spring on a Buick is made from a piece of  $\frac{1}{2}$ -in. steel tubing 14 in. long. A slot  $\frac{1}{8}$  in. wide is sawed in one end to a depth of  $\frac{1}{2}$  in. in one side of the tubing only. This is to prevent dropping the pin and check washer through the slot. A wooden handle is fitted to the other end.—W. C. Byrd, foreman Freeland Motor Co., Henderson, N. C.

## No. 1622—FORD RUNNING-GEAR CARRIER

A Ford running-gear carrier for unloading Fords from a freight car is made

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

1—Describe the shortcut briefly but clearly, in few words.

2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.

3—Write on ONE side of the paper only.

4—Sign your name and initials, the name of the company you are with, and the town.

Write plainly. If your name is unusual, print it in capital letters.

from one side of an old Ford differential case cut off 16 in. from the inside. It is set on the floor a little to the side of the car and the chassis is swung so that the little hump holding the crankcase drain plug goes into the top of the differential case. One man then holds the back end of the chassis up while the front wheels are put on.—M. L. South, Day County Garage Co., Webster, S. D.

## No. 1623—CADILLAC VALVE CONTAINER

This is a simple wooden container of box-like form designed to protect valves from injury when they are removed from the engine and also to provide a ready means of transportation. It is found that this is a most convenient means of delivering the valves from the repairshop to the machine shop, where they are refaced on a tool post electric grinder mounted at 45 deg. in a lathe. A further advantage of this device is that the order in which the valves are removed from the engine may be preserved and thus they may be replaced in their original seats. There is a tag holder on the end in which a card containing the

owner's name may be slipped.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1624—FIRE-EXTINGUISHER RELEASE

It has become customary to house fire-extinguishers in a box with a glass front in order to prevent their theft. When a fire occurs the glass must be broken to give access to the fire-extinguisher. Sometimes there is delay and difficulty in finding something suitable to break the glass with and the idea of supplying some sort of a hammer on a chain nearby each extinguisher has some objections also. A solution which meets all these difficulties is to cut away the lower edge of the box just where it supports the glass. Then a brass strip is soldered in place as shown. One side of the strip is securely soldered and the other side is lightly held in place with a drop of solder. This side of the strip is allowed to extend to form a handle. There is then no difficulty in tearing the brass strip away and thus allowing the glass to drop out.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1625—CYLINDER HEAD PLUG WRENCH

Cadillac eights are equipped with a plug or nut in the cylinder head which may be removed in order to give access to the combustion chamber for cleaning out carbon or for inspection. To remove these plugs a special wrench is required, consisting of tubing with a slot across the end. It formerly was the practice to form this wrench end, together with a hex nut which takes a socket wrench, out of a single piece of stock. Frequent breakages, however, made it advisable to change this construction so now a piece of tubing is set in the hex nut and held in place with a dowel pin. If the wrench becomes broken or worn it is a simple matter to remove the piece of tubing and insert a new length.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1626—FITTING CONNECTING-ROD CAPS

Rubbing connecting-rod caps on a sheet of emery cloth tacked to a board insures the cap being taken down evenly, which is not possible when the caps are filed in a vise unless extreme care and frequent gaging are practised by the workman. If the cap is not even and is set up in place, the bearing will be assumed to be O.K. if it is tight, whereas only one side may be bearing.—John Schultz, Turtle Creek, Pa.



# Editorial Observation

## Reaction—And Stability

**W**HEREVER one goes along the motor rows of America at the present time the big topic is the recent reduction in the prices of cars.

The trade's general feeling is decidedly unfavorable. There is a widespread question as to whether the cutting has not been a bit premature. Dealers generally would rather it had not been done—and among these dealers are those who handle the makes that have been cut.

The maker who thought he would arouse enthusiasm among his dealers by marking down his cars might get a somewhat different impression were he to go out and call on a few of his own dealers.

The president of the dealers' association in one of the big distributing centers says the cut in prices "surely has raised hell along the row," and from a Pacific Coast city comes the report that the news of the cut has caused dealers to begin cutting prices on cars on which no cuts have been announced by the factories. On the Coast are stocks of such size that the cut has done real damage. Dealers are absorbing losses in an effort to get from under.

In some cases the factory has taken care of the dealer and has rebated him on what he had in stock. In most cases, however, the dealer has to stand the loss. One Eastern dealer, with ten or a dozen cars, will lose \$5,000 of his own money. Of course, dealers made some extra profit by buying before the raises, so perhaps it equalizes things in some cases.

However, instead of accelerating buying, the general effect seems to be that buying has been retarded. The public is disposed to believe there will be still further cuts in prices. It had this belief, but it was being dispelled by the dealers up to the time the first cut was made. Now the public, instead of the dealer, had the evidence on its side and the dealers have little with which to combat the public's waiting argument.

Just what will happen no one seems to know, but all hope an element of stability will be injected into the situation in some way or other. If the cutting stops where it is and the price reduction movement seems to slow up, the dealers may be able to get sales started again by asserting that the cutting has ended for some months at least. And if there are no further cuts the public can be made to believe it is time to resume buying. But if the next six or eight months are a succession of cuts the market is going to remain backward and unstable and the boards are not going to be cleaned off for the coming production except at losses to the dealers.

In all this reduction business there is a decided reaction on those who cut prematurely. What answer

has the dealer for the prospective buyer if the buyer asks if the price wasn't put up to too high a point?

If the dealer says no, and the buyer asks: Then how can you cut? what can the dealer say?

If the dealer says yes, and the buyer asks: Then wasn't it profiteering? what answer can the dealer give?

The prices of raw materials are not going to hit the bottom again for some time to come.

Many of the factories must change over much of their equipment, which means that their internal condition will prevent a return to normal for months.

Labor isn't any cheaper—and probably won't be for a long time.

So, on what basis can a cut be explained in such a way that embarrassing questions will not be asked?

Also, dealers in many cities have cars in stock—more than they want. How are they going to move this high-priced merchandise in the face of a falling market?

The dealer sees the downward tendency and realizes that every reduction means that much lopped off his profits for the coming year. His morale can hardly be expected to stand when he is being made to suffer by the other end of the industry of which he is a part.

There are two ways out. One is for every one to cut—if he can—and have it over with and announce that his prices will stand for some months to come. The other way is for everyone to make a plain statement immediately as to what he is likely to do so the dealer may have some definite basis on which to go.

### THE BIG NEED IS FOR STABILITY.

Had the makers consulted together as soon as the armistice was declared and determined on a definite policy—possibly with governmental co-operation—the present unstable condition might not have arisen. But it did arise and the only thing left to do is map out some kind of definite course and prevent the coming months from being a chaotic period of uncertainty and slow sales.

In all these matters the dealers should be consulted. Furthermore, there should be more than a consultation between each maker and his own dealers. There should be a conference of the two associations representing both parties, the National Automobile Dealers' Association and the National Automobile Chamber of Commerce.

If there are old laws that stand in the way of such co-operative action the aid of our war-time governmental agencies should be invoked.

Something should be done—and that soon.

# Letters From Readers

November 6 Motor World printed an editorial—"Brothers All"—in which it suggested that great good might come from a regular joint meeting of the N. A. D. A. and the N. A. C. C. The officers and directors of both associations were asked what they thought of the idea. Many replies, mostly favorable, have been already published. Herewith is the opinion of the president of the Willys-Overland Co.

## Brothers All

Editor Motor World: On account of frequent absences from the city I have been unable to give any serious thought or attention to your letter of November 4, concerning joint meetings and good-will between National Automobile Chamber of Commerce and National Automobile Dealers Association.

I believe that anything that will cement and bring about closer relations between any organizations you mention, but pose the expansion and growth of the automobile as a means of expediting manufacturing and commercial industries will, naturally, redound to the full benefit of general business.

I believe that close co-operation already exists between the

organizations you mention, but in my opinion perhaps a closer tie for the general good might be brought about if regular and stated joint meetings could be held by those associations.

Being an automobile manufacturer my views on this point might be construed as coming from a selfish motive, but at the same time the industrial prospects for this country in the future are so stupendous and comprehensive that a greater success of any manufacturing business will result to the common good of the country, and advance its place in the industrial supremacy of the world, which rightfully belongs to it.

I am in full accord with your suggestion and hope it may be brought about. Yours very truly,  
JOHN N. WILLYS.

## Maud B. Booth Appeals for Cheer for Prisoners' Families

Editor Motor World: For years your readers have shown me a very kindly and generous interest in the little children of my boys in prison, and I want this year especially to appeal to their sympathy, for the need is as great as ever. The prison shadowed homes are very sad places at what should be the children's happiest season. From his prison cell the father is powerless to help them. The mother has all she can do to buy food and pay rent. Often the little ones go poorly clothed and the toys and joys that childhood covets are denied them. Every Christmas I have tried to play Santa Claus' partner in these homes, and in this way we have been able to lift the burden from the mothers' shoulders, and bring real Christmas gladness to hundreds of little ones.

May I ask your readers to remember this work and to send their gifts of money, clothing or toys addressed to Mrs. Ballington Booth, Volunteers of America, 34 West Twenty-eighth Street. This year I want my plea to have special urgency, because I am far away in France striving to bring a message of cheer to the boys of the American Expe-

ditionary Forces. I do not want to feel that my work for the prisoners' families has to suffer in my absence. I have a splendid staff of workers ready to do their part if the financial aid is forthcoming.

I wish it distinctly understood that the Volunteers of America is a duly incorporated society, with our books all properly audited, and that our treasurer will send a receipt for every dollar received and will hold vouchers for every dollar expended. Believe me, Maud B. Booth.

## He Puts 'Em Over

Editor Motor World: I am very much interested in the Motor World. I watch it all the time and have derived a good deal of satisfaction and help from it.

As I am a truck salesman for the Hart Ellsworth Auto Co. in this section of the world, I have noticed a good many hints and ideas of successful truck salesmanship. I would therefore like to give to other salesmen the method I used this fall selling trucks.

I took my demonstrator—Nash Quad and trailer—and went to the dry farm country. I got permission from one farmer to haul a few loads of wheat to town. I just kept rushing it in, and

when I had hauled enough to make the half payment this farmer drew his money and gave me the check.

I then volunteered my services to drive for a while as there were others watching this mighty power wagon. The results were I sold three more to this man's neighbors and will sell at least ten more this coming season.—Clarence Paul, Truck Salesman, Rexburg, Idaho.

## Attaboy! Back to Business!

Editor Motor World: Following is the contents of a telegram we have sent out to all our distributors and dealers—several hundred of them—throughout the country simultaneously with the announcement of the armistice:

*America victorious in this War as in every other War because it has always fought for the cause of Liberty based upon Justice and Democracy. In war we have prepared for peace and are now ready to enter a most prosperous season hand in hand with our distributors and dealers.*

Globe Rubber Tire Mfg. Co., New York.

## An Inspiration to Every Dealer and Garageman

Editor Motor World: I want to compliment you on your Winter Business number of Motor World. It was simply great. It should be an inspiration to every dealer and garageman who, after reading it, has no excuse for not doing his full capacity of business. I have gained a great deal of benefit from it and have begun to put into effect some of the ideas and suggestions which I read about there. I am striving hard to make this garage the finest equipped and the most efficient in the State, and I thank you for your encouragement.—A. G. McMillan, Proprietor Mac's Garage, Harrisburg, Pa.

## Should Stir Up the Interest of the Dealers

Editor Motor World: We are very much pleased indeed with your Winter Business number, which should certainly stir up the interest of the dealers.—John Millen & Son, Ltd., Montreal, Canada.

## Can't Do Without It

Editor Motor World: Motor World is the best thing that comes in to see us. We would not be able to get along without it.—Homer Motor Co., Homer City, Pa.

## Process Was Clearly Explained

Editor Motor World: I was greatly interested in your article on Repairing and Vulcanizing Tire Casings in your issue of Nov. 13. The repairing and vulcanizing is so clearly explained here that I should like to furnish some of our dealers with this article.—R. E. Clare, Sales Manager Lee Tire & Supply Co., Grand Rapids, Mich.

## Figuring Flat Rates

Editor Motor World: To supplement my letter to you regarding the "flat rate" method of charging for repairs, I promised to give you an analysis of the first month's business under the new plan—October.

We handled during the month 411 jobs on the flat rate without a single complaint concerning labor charges.

While our charge under the per-hour plan was \$1 per hour up to Sept. 1 and \$1.25 per hour during September, we collected during October \$1.44 per hour for every hour worked on these 411 jobs.

I have reduced everything to a per-hour basis to find out whether this \$1.44 is enough or too much. The angle, as I see it, is this:

If you buy a tin can, the price you pay includes a certain amount of wastage and overhead. The can is cut from a sheet of tin as economically as possible, but nevertheless there is waste. In the course of making thousands of cans this waste grows into a big pile. It would not be fair to charge the man who buys the can for the full piece of tin at the same rate he pays for the can. But just the same, the wastage must be paid for; otherwise it will consume the net profits.

In a repairshop there is a certain amount of wastage. Even if everyone is busy all the time, there is a certain amount of time lost in various ways, such as moving one car out of a stall and another in. Say this requires 10 minutes. If the customer paid for this 10 minutes it would cost him 20 cents at \$1.25 per hour. This sort of charge is improper. But he should pay for it in the per-hour rate based upon a certain amount of volume. Therefore, the problem is to find out what this amounts to, what proportion of real idle time the shop has and what the fair rate per hour is. Upon this can be based the flat rates as soon as it is known the length of time each operation requires.

I based our flat rates upon \$1.25 per hour. Had this been the amount collected we would have lost money. Here is the way it figures out for 4811 man hours during October:

Average per hour cost of each man hour including mechanics, testers, oil boys, car movers, etc. ....	\$0.49
Per hour cost of management—shop foreman, time keeper, service manager, cleaning boys, etc. ....	.11
Per hour cost of overhead—light, heat, power, rent, taxes, insurance, etc. ....	.07
Per hour cost of incidental expenses such as shop up-keep, printed matter, small tools, etc. ....	.06
Total cost of every man hour, exclusive of investment. ....	\$0.73
Average amount collected for each working man hour. ....	\$0.90
Expenses as above. ....	.73
Leaving a profit on each hour of	\$0.17

Thus you will see that while we collected \$1.44 for the hours charged to cus-

tomers, this was reduced to 90 cents because of the idle and non-productive time. A large part of this is on a "readiness to serve" proposition.

From this 17 cents must come the unusual expenditures such as government taxes and a return upon a large investment together with net profit. Unless it averages at least 15 cents per hour the shop will not make money.

In order to arrive at these figures with any degree of accuracy three kinds of time must be kept—"chargeable," "busy but non-productive" and "idle." The kind in which men are busy, yet non-productive, consists of oiling machinery, fixing the shop lights, repairing benches and all of the other things necessary to do daily in order to maintain a shop. This time is an expense the same as if outside workmen were called in to do the same work. On the other hand, the "idle" time is a readiness to serve, and as such is included in the per-hour charge.

If a shop will go to the trouble of keeping these records month after month and set down in columns which are easily compared with the previous month's records, the information they will convey and the opportunity they will offer for making more money will be astonishing.—Cadillac Motor Co. of Denver, P. E. Chamberlain, General Manager.

## Studebaker Explains Price Increases

The Studebaker Corporation of America is sending a letter to its dealers explaining the reasons underlying recent price increases of automobiles. It states that automobiles are not different from any other commodity and that their price is affected by the same elements that affect other merchandise, such as availability of labor and material and supply and demand of the finished product. The letter follows:

To All Dealers:

Why get all excited over some manufacturer cutting the list price of his automobile? Analyze the situation, find out how much he has advanced his car since January 1 and then make your comparisons and decide whether those advances were warranted or not.

Automobiles are no different from any other commodity and the selling price is governed by the cost of production as well as supply and demand. The supply is governed by the number of automobiles obtainable. The demand by your ability to convince the public that they want what you have to sell—in other words, Salesmanship.

Price of automobiles will decline when the price of labor and raw materials decline. The price of labor and raw materials will be reduced when the expense of living and producing raw materials are lowered. The cost of living will be reduced when price of food goes down and the Government has guaranteed the farmer a fixed price for his 1919 crop.

The '19 Series Big Six has been advanced a total of \$290 since January 1, because our cost advanced to this extent and then some.

The answer is self-evident. Inflated prices must come to a level in keeping with the cost of material and labor. Therefore, ana-

lyze the other fellow's price. See what his price was January 1. Compare it with the price of November 1, and thus determine what constitutes an inflated selling price.

In order to protect dealers who have cars in stock and permit them to protect prospective buyers we hereby guarantee prices as against decline of March 1, 1919, and you are authorized to give the same guarantee to your customers, it being understood that if the present prices of Studebaker cars are reduced by the corporation during the period mentioned, we will protect all dealers on cars they have in stock at the time of reduction and also on all cars that they have sold to customers under the above guarantees from this date.—The Studebaker Corporation of America, Automobile Branch, A. J. Brechtel, Manager.

## Who Can Answer?

Editor Motor World: I would like to know the address of any other exclusive truck dealer who carries a line of truck accessories.

I note that you run in the Motor World from time to time a write-up of different truck dealers, especially where they are selling trucks that are used in the line of work different from the ordinary.

As a matter of information I have all of East Texas in my territory, and am doing about \$200,000 business this year, and some of the trucks I have sold are being used in the lines where trucks have never been used before in this part of the country.—TEXAS.

## Sure Worth the Money

Editor Motor World: The Motor World is sure worth the money to repairmen.—Noble F. Burchard, Blackmer's Garage, Middlebury, Vt.

## Push the Good Work Forward

Editor Motor World: Your Winter Business number is just brim full of good points for winter business and I find it a great help. Push the good work forward to the garageman.—Anderson's Garage, Princeton, Ill.

## Let's Have More of Them

Editor Motor World: The Winter Business number was certainly a cracker-jack. Let's have more of them.—M. E. Strader, Decatur, Ill.

## He Likes It Too

Editor Motor World: I have taken Motor World for 5 years and would not be without it.—Frank C. Bellman, San Bernardino, Cal.

## Carhart Adds Miami Trailer

OKLAHOMA CITY, Nov. 28—The Carhart Motor Co., which distributes Overland cars and trucks, has taken the agency for Miami trailers and will handle them in conjunction with its car and truck business.



# Omaha Is After the Tractor Trade

*And It Won't Be the Fault of the Motor Car Dealers  
If They Don't Dominate the Field*

**A**LREADY Omaha motor car dealers and distributors have bitten off a big slice of tractor distributing territory, and they are out after more.

Tractor distributors are almost unanimously in favor of motor car dealers, and the dealers are in favor of tractor distribution. So there you are.

It takes merchandising ability, and service, to sell tractors just as well as it does to sell cars and trucks. And this is where the car dealer shines. But read the story.

OMAHA, NEB., Nov. 29—It will not be the fault of motor car distributors of Omaha if they do not dominate, if not actually control, the tractor trade in the Omaha territory.

The distribution of some dozen or more of the leading tractors is in the hands of motor car men, and from the measures which are being taken to go after the trade it is certain that the motor car interests, including both distributors and dealers, will be the dominating factor in the business.

"The problem confronting the motor car distributor who has taken on a tractor is to find the man who can sell tractors regardless of his pedigree," says J. S. Elfred, manager of the Hansen-Tyler Auto Co. of this city. The Hansen-Tyler Auto Co. is wholesale distributor for the Scripps-Booth in the Omaha territory, and recently has taken on the Allis-Chalmers tractor.

## Separate Departments Not Successful

"I do not believe the average retail implement dealer who tries to combine implements and automobiles without maintaining a separate organization for each department can succeed, generally speaking," continued Elfred. "This applies as well to the combination of implements and tractors. Please bear in mind that I am speaking generally. There are exceptions to the general thing, of course. On the contrary, automobiles, motor trucks and tractors go together naturally. They make an ideal combination because all are sold according to the same plan. It has been my experience that the old line retail implement dealer will not carry a stock of tractors as a rule. He objects to making the deposit required in the automobile, truck and tractor business."

Last week the retail implement dealers of Nebraska met here in annual convention and were admonished by a modern and successful business man who ad-

dressed the convention that departmentation of their business was absolutely essential if they would succeed under present day conditions. This man told them that his observation of the implement business had led him to the conviction that too few retail implement dealers realized this fact, and that if they did not wake up to it more progressive business men would supplant them.

This week, at Columbus, Ohio, the implement dealers of that State voiced a protest against the deposit system prevalent in the tractor trade. They could see no justification for it and regarded it as an imputation upon their integrity. The reasons lying behind a deposit condition upon their purchases won their grudging recognition without winning their approval.

## Customs and Traditions Differ

The fact is that the customs and traditions of the implement trade are not those of the automobile and the tractor trades, and implement retailers find it difficult to conform to them in consequence. Some of them obstinately refuse to conform. This condition of mind militates against retail implement dealers as a class, and is one of the reasons why tractor manufacturers are turning so generally to motor car dealers as the most desirable tractor agents.

The common attitude of the motor car distributor who takes on a tractor is well represented by that of the Van Brunt Automobile Co. of this city. Originally the Van Brunt concern was a jobbing house for implements and vehicles in Council Bluffs, Iowa. For a great many years the business of the concern was confined exclusively to retail implement channels and goods were sold in accordance with implement methods and implement traditions. The company knew no other way in which to do business. Then came the automobile.

The Van Brunt concern was among the

first of the Missouri River jobbers to go into the automobile business extensively. It did not take very long to make evident the fact that the implement and vehicle business would not mix readily with the automobile business if the same dealer was to be used, especially when reliance was placed upon the traditional retail implement dealer to handle both lines.

To meet the unsatisfactory situation the automobile business was divorced from the parent concern and began to do its business with motor car men and on motor car methods. In time, because of the death of the senior Van Brunt, the implement and vehicle part of the business was discontinued, the motor car department was moved to Omaha, and the concern went exclusively into the distribution of automobiles. Then came the tractor.

Enlightened by past experience with the retail implement dealer the Van Brunt Automobile Co. has gone definitely after the motor car dealer as a tractor agent to the practical exclusion of the implement dealer from consideration.

## Implement Dealer Suffers

Manager George Van Brunt says that in training, experience, habit, mental attitude and inclination the retail implement dealer suffers by comparison with the motor car dealer as a desirable agent for tractor sales. This may be taken, too, as expert testimony, because this concern in particular has had years of experience with both classes of dealers.

The attitude of the Van Brunt company is particularly significant, too, at this time, since, as Overland distributor in the Omaha territory, it will, about the first of the coming year, take over the distribution of the Moline-Universal tractor. For the last two seasons the company has distributed the Interstate tractor.

Fred C. Hill, general manager of the J. T. Stewart Motor Co., which has recently added the Frick tractor to its automotive line of Pierce-Arrow and Mitchell cars and Pierce-Arrow and Bethlehem motor trucks, adds the weight of his influence to the same general tendency. "We go after the motor car dealer because his organization is the best equipped for going after the tractor business," says Mr. Hill.

## Success Depends on Man

E. A. Bullock, manager of the Nebraska Bull Co., which is the wholesale distributor here for the Bull tractor, is not quite so positive in his preference for the motor car dealer, for he says success in the tractor business "depends

upon the man more than it does upon his business pedigree." At the same time a very large proportion of Mr. Bullock's most productive dealers are motor car men.

The C. J. Dutton Automotive Co., distributor of Briscoe cars and Kissel cars and trucks, has taken on the Sandusky tractor. This concern got into the tractor business very recently and has not had time to formulate a definite trade policy as yet. Nevertheless present preference inclines strongly toward the motor car dealer.

Much the same condition prevails with the Noyes-Killy Motor Co., distributor for the Lexington and Saxon cars and Signal trucks. The Wisconsin tractor has been added to the line, but too recently to say yet just what the trade policy will be. However, it is the present intention of the company to look for its agents almost exclusively among motor car dealers.

#### Shies at Big Deals

"The retail implement dealer as a rule is not accustomed to big deals. For this reason the tractor business is out of his class," says J. M. Oppen, of the Jones-Oppen Co., distributor of the Reo car, the Reo and Stewart motor trucks and the Cleveland tractor. "The motor car dealer, upon the other hand, is used to coming in and giving his check for \$1,000 or \$1,500, as the case may be, and never thinking anything about it. Also the motor car dealer makes the better tractor agent because he will get out and hustle for orders, usually keeps a car or two for that purpose in fact, while the implement dealer is too much inclined to sit around and wait for the

business to come to him. You can say we are for the automobile dealer every time."

Nothing need be said specifically about the policy of the Sample-Hart Motor Co., Omaha distributor for the Fordson tractor, for everybody knows that the Ford agent has the call every time if he wants to exercise it.

#### They Favor Car Dealers

The Nebraska-White Co., distributing the Parrett tractor in a wholesale way, also will favor the motor car dealer.

Among other tractors which will be sold in the Omaha territory through motor car agency is the Turner Simplicity.

This brief excursion among the leading motor car-tractor concerns in Omaha indicates to what an extent the tractor business will be put into the hands of the motor car dealers in the Omaha territory during the coming year.

What is true of Omaha in this respect, too, is typical of what is the fact in most of the large distributing points of the country. It means nothing less than that the motor car interests will dominate in the tractor trade from the wholesale distributor down through the dealer, and it will not be surprising, in the light of developments during the last few months, if the motor car interests secure control of a majority of the manufacturing in the tractor line as well.

The influence of the motor car dealer personally and of motor car methods as an example both are needed in the Omaha territory. It is common custom for retail implement dealers to sell tractors on time. True, where this is done, notes are taken which bear interest from their dates at a rate 2 per cent higher

than the prevalent banking rate, and usually the notes are bankable. The dealer justifies this practice upon the ground that he is accommodating his customer and that he is preserving the customs of the implement trade, and that in addition he is himself deriving an enhanced profit from the extra 2 per cent on the note.

Some motor car dealers, it must be admitted, are infected with the same complaint and are reported to be selling on time also, but this is not generally the case. For the most part they get cash on delivery.

Admittedly there has been some excuse for granting credit terms, or rather time terms on tractor sales in the Omaha territory during the last year because the banks, under war demands, have not held cash which has been available for discount locally, and not many of them have availed themselves of the privileges of the Federal Reserve System.

They have been unable, or unwilling, to finance automobile or tractor sales, and as a result the dealer has been compelled in some instances to be his own banker.

This condition will pass now speedily, however, and no further excuse will exist for making time tractor sales. Any man who is able to give a dealer a note which the latter can discount at the bank just as easily can go to the bank himself and borrow the money and make a cash settlement for his tractor.

Cash is the accepted custom in the motor car trade, and with the tractor business predominantly in the hands of the motor car dealers, as obviously it will be, cash will become equally well established as the custom in the tractor trade. And this is as it should be.

### *Dealers of the South Give Support to the N.A.D.A.*



*THE DEALERS OF GEORGIA and adjacent sections gave their support to the National Automobile Dealers Association at a meeting held in Atlanta, addressed by President F. W. A. Vesper (No. 2) and Executive Secretary E. E. Peake (No. 1) of the N. A. D. A.*

# The RETAIL NEWS

## New Truck and Tractor Dealers

The Chicago Pneumatic Tool Co., Chicago, has added the following companies to its list of motor truck dealers: Allied National Corp., 116 Broad Street, New York City; Arthur Walter Liebers, Inc., 1450 Bedford Avenue, Brooklyn, N. Y.; West Virginia Truck & Supply Co., Clarksburg, W. Va.

Paul Hunter, of the Dallas Garage, Dallas, Ore., has added a special tractor service department.

M. A. Rickard, Corvallis, Ore., has taken the agency for the Republic truck.

Automobile dealers and garagemen in Corvallis, Ore., who have taken sales agencies for tractors are as follows: Whiteside & Locke, Fordson; G. C. Moore, All-Work.

C. J. Shreeve, Dallas, Ore., has obtained the agency for the Happy Farmer tractor.

Turner & Christensen, Overland and Buick dealers at McMinnville, Ore., have entered the truck field with the Republic and Nash lines.

C. A. Mitchell has purchased a half interest in the garage and car and truck agency at McMinnville, Ore. The new firm is known as Watkins & Mitchell.

Smith-Courtemanche, McMinnville, Ore., have secured the agencies for the following tractors: Nelson, I. H. C., Moline, Emerson and Oil Pull.

The McCoy Bros. Auto Co., Newberg, Ore., has taken on the Denby truck.

The Wiles Auto Co., Chevrolet dealer at Forest Grove, Ore., has entered the truck and tractor field with Bethlehem trucks and La Crosse tractors.

Peterson Bros., Hillsboro, Ore., have signed contracts for sales agencies for G. M. C. and Republic trucks, as well as Cleveland and All-Work tractors.

E. J. Allen, Ford dealer at Woodburn, Ore., has opened Sampson tractor salesrooms.

J. W. Painton, proprietor of the Newberg Auto Co., Newberg, Ore., has secured the agency for the G. M. C. truck.

The Cardwell-Lyman Sales Co., Oklahoma City, has been formed to distribute Cleveland tractors in Oklahoma.

Little Rock Motor Car Co. will distribute Cleveland tractors in Arkansas.

Charles E. Cies, Craig, Mo., has taken the agency for the Bates Steel Mule tractor.

The Willys-Overland-Pacific Co., Portland, Ore., has taken the agency for wholesale and retail distribution in 12 counties in Oregon of the Moline Universal tractor. The Oregon Moline Plow Co. in Portland will continue to distribute the tractor in other counties of the state.

J. H. Graham, Portland, Case and Scripps-Booth distributor, has taken the agency for the Denby truck.

The Ohio Oldmobile Co., Cleveland, will distribute Denby trucks in northern Ohio. C. C. Chaffin, president, is actively in charge of the territory.

Motor Sales Co. of Charleston, W. Va., is distributing Denby trucks.

## Developments in Garage and Repairshop

E. A. Williams, Spokane, Ford distributor, will open a new garage and salesroom at 807 First Avenue. The structure is two stories.

C. W. Twitchell and William Dickinson, Spokane, have opened an electrical automobile repairshop at West 1223 Sprague Avenue.

The Eldridge-Buick Co., Seattle, has taken the agency for the Rex all-season top, for the city of Seattle.

Edward R. Roesch and Max Olsen, both of Seattle, have formed a partnership under the name of Roesch & Olsen, to handle the Velle line, and have a new salesroom at 1109 Pine Street.

The Wilson Garage, 375-391 Summit Avenue, Milwaukee, Wis., is installing one 40-hp. and one 75-hp. electric motor in its repairshop to cover increased needs due to enlargement of the equipment.

The Crescent Motor Co., 56-60 North Main Street, Fond du Lac, Wis., has absorbed the garage and repairshop business of John D. Giddings, 36-40 Fourth Street, who becomes a stockholder and director of the Crescent company. The officers now are: President, Robert Zinke; vice-president and manager, John D. Giddings; secretary and treasurer, A. R. Zinke. The company is Overland and Studebaker dealer. Extensive improvements are to be made in the Crescent garage during the winter. The repairshop will be doubled in size and a battery charging department installed. A ramp, the first in this part of the state, will be provided in place of installing an elevator.

B. McFarland, Bonner Springs, Kan., who purchased the Golden Belt Garage Building some time ago, has now purchased the garage business.

Archie E. Bottom, Baxter Springs, Kan., has bought the Baxter Cab Line Garage and will do Ford repairing in connection with the taxi and tire work.

Burchinal & Chitwood have moved their garage to the Hyatt Building.

Horton & Ralston, Great Bend, Kan., have opened the Great Bend Auto Painting & Trimming Co., at 2015 Twelfth Street.

J. J. Anderson & Son, Garnett, Kan., have bought out the Crescent Motor Sales Co. and will continue the automobile business.

The Reno-Buick Co., Hutchinson, Kan., is the local dealer for the R. & L. electric automobiles.

John Ludwig, Leavenworth, Kan., has opened a tire repairshop at 327 Cherokee Street.

G. E. Trout, Paola, Kan., has opened a repairshop.

The Allen Hayes Auto Co., Topeka, Kan., has consolidated with the Service Station of the Overland-Wierenga Co.

J. R. Prewitt, Pleasant Hill, Mo., has bought the plant of the Green Light & Power Co., and will devote the property to his garage business.

A. Heinman, Versailles, Mo., has bought the A. Jacobs Garage and will do repairing.

The Dort Sales Co. of Kansas City, Mo., has opened a branch in Oklahoma City. Charles McDaniel, vice-president of the company, will have charge of the branch.

The Wolleson Motor Co., Peery, Okla., is closing out the entire automobile stock. The company will continue in the garage and accessory business.

The Times Square Auto Supply Co., Tulsa, Okla., has opened a store at 213 Second Street.

The Paramount Tire & Rubber Co. of New York has opened a branch at Dallas, Tex. M. A. Schwartz is the sales manager.

The Consolidated Motors Co., Ltd., Houston, Tex., is conducting a garage service station and repairshop combined. It also handles a high class line of tractors, trucks and trailers and also passenger cars.

The General Auto Supply Co., Lancaster, Pa., has recently bought out the Lebanon Auto Tire Co. at Lebanon, Pa., where it will start a branch store. The company also operates a branch store in York, Pa.

Eugene A. Johnson, Davenport, Wash., has sold his repairshop to F. M. Martcellus, owner of the Sandy Garage.

### New Garages

Union Auto Co. (100 x 120).....	Eau Claire, Wis.
Bailey Garage .....	Douglas, Kan.
Ray Harper .....	Highland, Kan.
Pool Garage .....	Hartsville, Mo.
Smith & Johnson Garage.....	Warrensburg, Mo.
Liberty Garage .....	Miami, Okla.
Ottawa Motor Sales Co.....	Miami, Okla.
Abraham Friedman (\$1,700)....	Philadelphia
George Stock .....	Philadelphia
William J. Blackburn.....	Philadelphia
C. D. Hackett (40 x 100 ft.)....	Philadelphia
Thomas Raby, Jr. (\$11,800)....	Philadelphia
Heymann Bros. (114 x 39 ft.)....	Philadelphia
Michael Kirshner .....	Philadelphia
S. Levin (\$16,750).....	Philadelphia
N. B. Jackson (\$1,200).....	Philadelphia
Richard Kellough (\$1,150).....	Philadelphia
John E. Waterman.....	Philadelphia

## Passenger Car Dealers Add Trucks and Tractors

ST. LOUIS, Nov. 29—These are the exclusive passenger car dealers in St. Louis who have added lines during the recent period of selling stress. It does not include Packard, Pierce-Arrow and Weber Implement & Automobile companies, which companies always handled a varied line.

Firm	Additions
De Luxe Automobile Co. (Oldsmobile),	Lalley Light
Mound City Buggy & Auto Co. (Allen),	Panhard Truck
S. Levin (\$16,750).....	Tractor
Overland Automobile Co. (Overland),	Plowman Tractor
Wilson Motor Car Co. (Haynes),	Accessories
Briscoe Motor Sales Co. (Briscoe),	Axson Truck
Sandusky Tractor Light	
Davie Motor Car Co., Wasco Garage Heater	
Tate-Gilham Motor Car Co. (Dodge),	
Graham Bros. Attachment	
Dodge Trucks	
Harry Newman, Inc. (gave up car agency).	Truck and Trailer
Ideal Motor Sales Co. (Columbia, Pullman)	
Cleveland Tractor	
Mid-West Sales Co. (Apperson),	
Clydesdale Truck	
Bleeck Motor Sales Co. (Crow-Elkhart,	
Glide) .....	Menominee Truck
Welling Motor Co. (Olympian),	
Gramm-Bernstein Trucks	
Cadillac Automobile Co. (Cadillac),	
Knox and Lawton units	

## Gray Tractor Refined

*Weights Only 6200 Lb.  
—Has Wide Driving  
Drum and Many  
Other Improvements*

**T**HE Gray tractor, which was shown to the public for the first time at the National Power Farming Demonstration at Fremont, in August, 1914, has been refined and lightened until the model for 1918, and what will be the model for 1919, weighs but 6200 lb. It is made by the Gray Tractor Co., Minneapolis, and originally weighed 8500 lb. It drew 6 bottoms.

Anti-friction, flexible bearings have replaced the babbitted bearings of former models; drop-forged, heat-treated, cut-steel gears now are used throughout; the double, heavy duty chain which provides final drive has been enclosed and runs in oil, and many other minor mechanical improvements have been adopted.

The powerplant in the Gray is a 4-cylinder, vertical,  $4\frac{1}{4} \times 6\frac{1}{4}$  Waukesha engine, set crosswise of the frame. The crankshaft is of chrome nickel steel, 2 in. in diameter, heat-treated and ground to

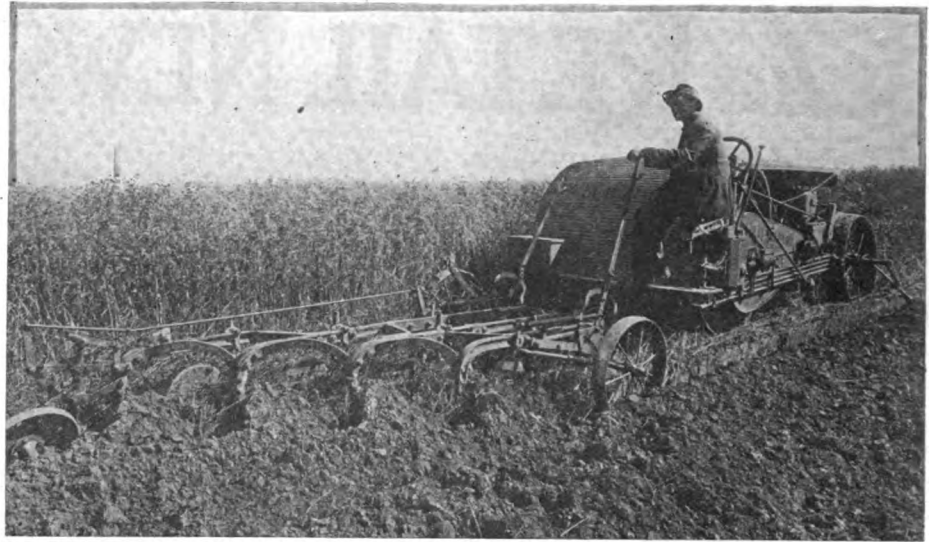
size. The camshaft and connecting rods are drop-forged, and the latter have interchangeable bearings. The valves are enclosed in a dust-proof chamber, provided with removable plates for inspection.

Lubrication is by automatic splash system, with oil supplied by a positively driven pump. The supply of oil available in the reservoir always is shown by an oil gage. Ignition is by K-W high-tension magneto with quick starting de-

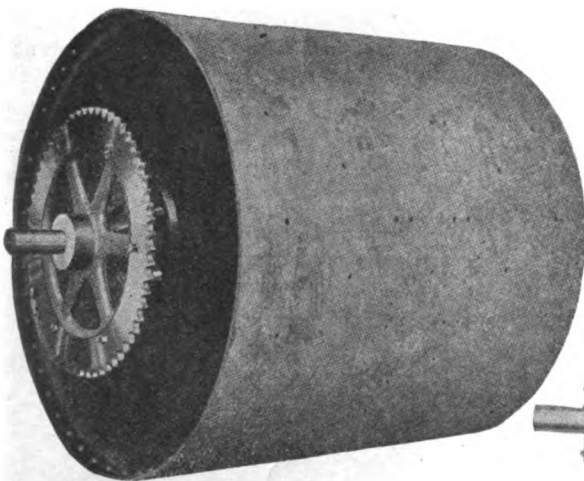
vice. The engine is water-cooled with positively driven centrifugal pump to maintain circulation. The radiator is of the honeycomb type and is held in position directly over the flywheel. The same frame which holds the radiator supports the fan, which is mounted on ball bearings and is driven directly from the flywheel.

The clutch is of the cone type and of the company's own design. It is easily adjusted, has few parts to wear and is controlled by a foot pedal on the operator's platform. The gearset is very simple. It has no bevel gears nor differentials. In all there are but six gears, all cut from drop-forged, heat-treated steel blanks. The gearset is completely enclosed and runs in oil. The pulley take-off is direct, without the use of gears.

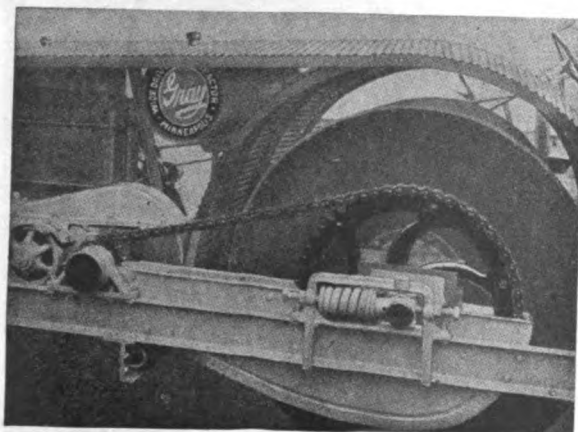
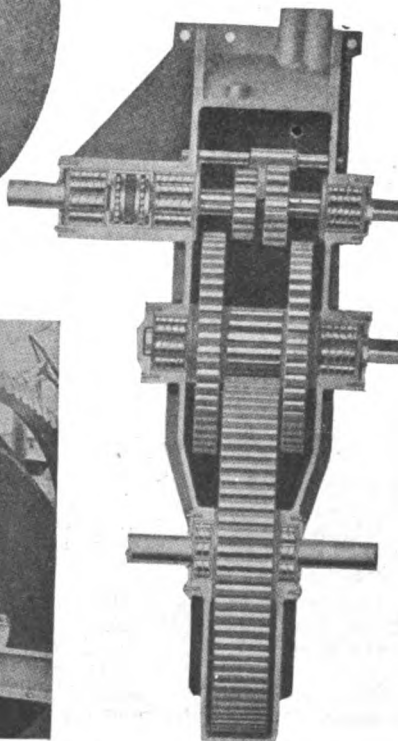
Final drive is from a jackshaft in the drumshaft. This is accomplished by a heavy duty roller chain, made of heat-treated nickel steel, enclosed and running in oil. It is driven by hardened driving sprockets on both ends of the jackshaft and runs over cast steel sprockets on the drive hubs, which are attached to the ends of the drum, not to the axle. The drum thus is driven evenly from both ends and power is transmitted to the rims through the tightly riveted and solid ends. The sprockets are bolted to the



*The Gray 18-36 tractor, which is distinguished by the broad driving wheel extending clear across the machine. A chain is used in driving the drum*



*At the left is the drum with sprocket attached. Below are the details of the transmission*



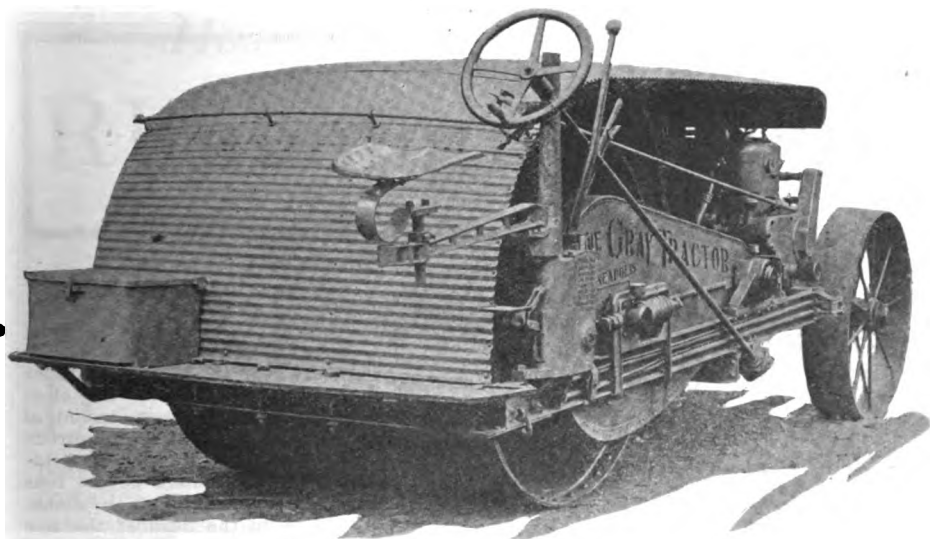
### Details of Gray Tractor

Rating: 18-36.  
Draw bar pull at normal speed: 3750 lbs.  
Weight: 6200 lbs.  
Price: \$2,250.  
Type: Drum.  
Diameter drum: 54 in.  
Engine: Waukesha.  
Number cylinders: 4; vertical.  
Bore and stroke:  $4\frac{1}{4} \times 6\frac{1}{4}$ .  
R.P.M.: 850.  
High gear ratio: 54.8 to 1.  
Low gear ratio: 68 to 1.  
Fuel: gasoline.  
Air cleaner: Bennett.  
Belt pulley diameter: 11 in.  
R.P.M. belt pulley: 850.  
Belt speed: 2600 f.p.m.  
Speeds: Two forward; one reverse.  
Speed range: 2 to  $2\frac{1}{4}$  m.p.h.  
Final drive: Chain.



## Here's the Woman "Garageman"

**M**RS. H. L. GORDON, shown below, is the operator of the garage shown at the bottom of the page. It is the Onondaga Garage at Cedar and South State streets, Syracuse, N. Y. Her garage is successful, as well as neat and clean, and is run in a business-like manner. It is not her fad and there are no Sunday supplement frills to it. It is a plain business matter



*The operator sits at the extreme right of the tractor, giving him a clear view of the furrow*

hubs by steel bolts with castellated nuts and are easily replaceable. The chain drive is spring mounted.

The drum is solid, with enclosed ends and with dimensions of 54 in. both ways. The front steering wheels track just outside the drum so that the Gray rolls a strip the full width of the tractor, 70 in.

The frame is built up of structural steel, solidly riveted and braced and has 3-point suspension. The frame is practically one piece and is constructed with special reference to shocks and strains. The frame is hung from the rear axle, not mounted above it. This gives a low center of gravity and provides for a drawbar at the correct height. As a matter of fact, the frame itself acts as a drawbar and delivers the power of the engine in a direct line from the rear axle. The fact that the Gray has no dif-

ferential enables the operator to hitch at convenience at center or either corner of the frame.

The steering gear is of the motor car type, with cut steel gears which run in an oil bath, are backed up by ball bearings and are tightly enclosed and protected from dust and dirt.

The Gray is furnished with side arms for harrowing, and it is common in the territory wherein it is mostly used to attach harrows to the side as well as to the rear, thus covering at a single operation more than twice the usual width covered in such operations. The same advantage can be employed in seeding operations. In plowing the drum runs directly ahead of the plows and acts as a roller, which crushes down weeds and trash, making it possible for the plows to turn clean furrows.

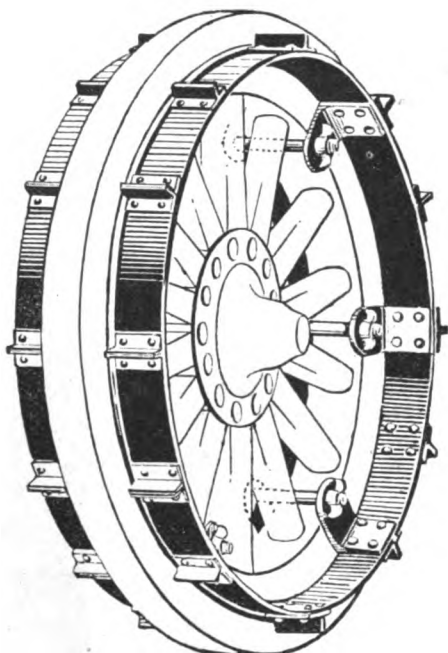




# Automotive Equipment

## FOLEY EXTENSION TRACTION RIM

This is an extension rim fitted with lugs, and intended to be attached to the rims of truck wheels to get traction in soft ground. The traction rims may be bolted to the outside of each wheel or if there is clearance, they can be bolted to the inside, or where the character of the roads is very soft, they may be bolted to both sides and in addition chains can be put across the tire. On hard roads the rims do not come into action at all as the lugs are below the level of the tire treads. Different methods of attachment are provided to enable the device to be attached to any kind of rim. Prices range from \$20 to \$60 per set of two rims and from \$35 to \$100 per set of four, depending on the diameter and width.—Foley Traction-Rim Co., Minneapolis.



Foley Extension Rim



Arc Welding Tool

## ARC WELDING TOOL

This is an electric welding tool designed to make the changing of the electrodes definite and to hold the electrode to permit any amount of pull in case the electrode freezes to the work. The welding current enters at the rear end of the composition shank, passes to the head of the tool and from there to the electrode. There are no joints except where the cable is soldered to the shank. There is a large contact surface between the electrode and the holding head and the electrode is clamped by a spiral segment operated by a lever.—Arc Welding Machine Co., Inc., 220 West Forty-second Street, New York City.



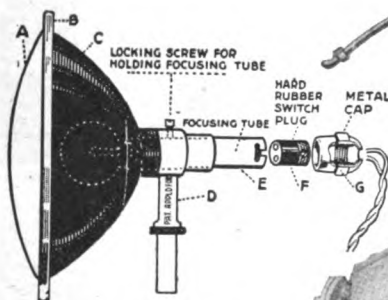
Burke Ox-iliator

## BURKE OX-ILIATOR

This is an air moistener which passes the air to be consumed by the engine through the water in the Ox-iliator tank before it reaches the intake manifold. The air is taken through valves in the sides of the tank, being pulled in by the vacuum in the manifold. It passes through the water in the tank and thence to the manifold. Made in two models, one to fit Fords, \$5, and one to fit other cars, \$10.—Automobile Devices Co., Philadelphia.

## SILVERBEAM SPOTLIGHT

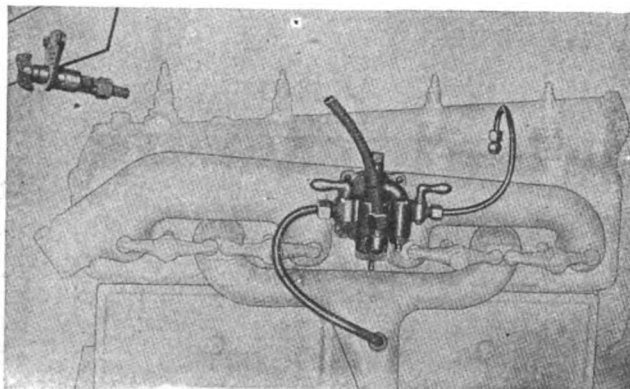
This is a small spotlight that throws a narrow pencil-beam of light for a considerable distance with practically no divergence. The case is constructed entirely of brass and the reflector is spun cartridge brass, ground, polished and nickel plated, then plated with silver. The lamp is fitted with 6-8 volt 24 c.p. nitrogen bulbs. The brackets are of cast brass and may be had with special stop to prevent the light being thrown above the legal height.—Charles Kaufmann & Sons, Santa Ana, Cal.



Silverbeam Spotlight

## ADERHOLDT'S MOISTURE CARBURETER

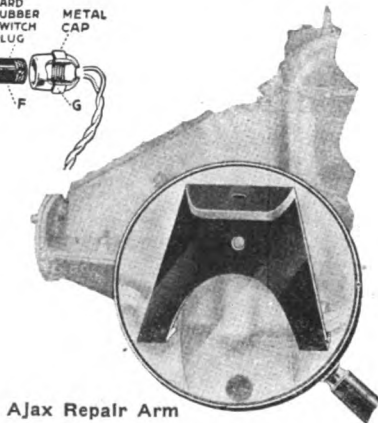
This is a device for supplying steam to the charge of gas when it is in the manifold and before it goes into the combustion chamber. The mixing of the steam with the gas is claimed to make combustion more perfect and so prevent the formation of carbon. The water is taken in small quantities from the circulation system by the vacuum in the manifold being fed through a vibrating needle valve to the manifold which turns it to steam which is then piped to the intake manifold. Price \$12.50.—Aderholdt Mfg. Co., 1528 Broadway, Denver, Col.



Aderholdt's Moisture Carbureter

## AJAX REPAIR ARM FOR FORDS

This is a repair arm for the engine crankcase support to be bolted to the crankcase bolts and the frame in place of the riveted arm which is standard on the Ford. The use of the arm permits the repair to be made without taking down the engine. The arm is made of ship-steel plate 3/8-in. thick. All holes are drilled ready for installation. Price \$2.—Ajax Mfg. Co., 319 Van Ness Avenue, San Francisco.



Ajax Repair Arm

## SINGER'S MENDING STICK

This is a mending composition for repairing cracked water jackets and other similar parts, the composition being in stick form. To repair a crack, the parts are heated and the composition forced into the cracks. It being plastic when heated. It is claimed to withstand a pressure of 200 lb. to the sq. in. Price \$7.20 per doz. sticks.—Clasby Mfg. Co., Pueblo, Col.

*How Colorado Boosts***RURAL MOTOR EXPRESS**

**Celebrates Highways Transport Day—Stages Mammoth Parade of Motor Trucks in the Streets of Denver—Nearly 300 in Line—Suggests Similar Demonstrations Throughout Country**

**D**ENVER, Nov. 27.—The State of Colorado has placed before dealers, owners and farmers possibilities of rural motor transportation in a way that has never been attempted before.

On Nov. 15 a mammoth parade of nearly 300 trucks headed by the Fort Logan Military Band and including vehicles of every type from the heaviest trucks to the lightest, some of them drawing as many as three trailers loaded to capacity, paraded the streets of Denver headed by a detachment of police of motorcycles and by Governor J. C. Gunter himself.

Colorado has a transportation problem. She has 5000 miles of railroads and 40,000 miles of highways. The railroads are inadequate to supply the population with food products, and with the materials and machinery upon which industry is built. It was early realized that rural motor transportation would help to solve the problem. And it was for this reason that Governor Gunter designated Nov. 15 as Motor Transport Day.

More than 75,000 people witnessed the parade. Thousands of copies of a pamphlet entitled "Why People Should Use Motor Trucks" were distributed throughout the wholesale market territory through which the parade passed. The parade effectually told the proposition of rural motor transportation throughout the length and breadth of the city.

So successful was the demonstration and the idea behind it that similar demonstrations likely will be held in many other cities throughout the U. S. It is proposed now to have every Governor designate an official Motor Transport Day, so that the success achieved by Colorado may be spread over the whole land.

Colorado has been a pioneer in the establishment and the development of the Rural Express and the Return Loads Bureau.

Denver has developed the motor truck as a means of sending its shipments to a score of villages in all directions, going out as far as 30 miles. These motor trucks have furnished both freight and passenger service, and the routes were developed with the idea of loads both ways. With the need pointed out by the

*Proclamation*

WHEREAS, The ever-increasing needs of our military and naval forces abroad and at home are constantly and inevitably demanding more tonnage capacity from our railroads; and

WHEREAS, In the face of this condition thousands of tons of vegetables and fruits are allowed to go to waste annually in this country for lack of transportation, even in times of peace, while at present the world is suffering from want of food; and

WHEREAS, The call to arms has drawn thousands of young men from our farms, making the task of those left behind one which calls for every ounce of energy, increased efficiency and industry;

Now, THEREFORE, I, JULIUS C. GUNTER, GOVERNOR OF THE STATE OF COLORADO, do hereby proclaim Friday, November 15th, 1918, HIGHWAYS TRANSPORT DAY in Colorado, and I do call upon all farmers, merchants and others interested in transportation to meet that day in their respective communities and to consider then the serious problems which face our commonwealth in the transportation of supplies. Provided, that in any communities where Board of Health regulations prevent, these meetings shall not be held until such time as officials shall designate as compatible with the public health.

And I do further designate officers of the Highways Transport Committee of the State Council of Defense as officials in charge of these meetings and do call upon all patriotic organizations to lend them their aid to the end that we may eliminate waste, conserve power and otherwise stimulate our efforts toward the winning of the war.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State to be affixed at the State Capitol, in Denver, Colorado, this 30th day of October, A. D., 1918.

JULIUS C. GUNTER,  
*Governor of Colorado.*

State Council of Defense of making this motor truck transportation a part of every community, the benefits of this motor truck transportation have been catalogued.

It's a part of Colorado's program for the marshalling of food products to a dozen principal shipping points in the State, and is well under way. In this the motor truck is playing a big part. Favorable weather conditions during the late summer and fall have greatly facilitated the railroad haulage under governmental supervision. Confronted, however, with record breaking crops and stimulation of wheat growing that even a few years ago was not believed possible, officials of Colorado and particularly the Highways Transport Commit-

tee of the Colorado Council of Defense, have met the issue by encouraging rural motor express lines.

Several transportation companies already have incorporated and are trying out the new idea of making regular trips daily between towns situated from 30 to 50 miles apart. One of the most recent incorporations is controlled by a group of dairymen from Castle Rock who have combined their business opportunities with the general advance of economic distribution of farm products in general. The company has several trucks which make regular trips to Denver, a distance of 32 miles, bringing to the metropolis dairy products and returning with a load of small wares to be dropped at towns along the way.

This practice developed through the extension of the suburban motor traffic, and more generally, perhaps, because of the congested conditions of railroad freight traffic due to war shipments.

Fruit, vegetables, milk and eggs arrive in market or direct to the door of the consumer fresh and desirable on the day they leave the farm and command the highest market prices. It is regarded by agricultural experts as the most encouraging and potent indication to the farmer that no matter what his production, his produce will find a speedy way to market.

With this argument, coupled with the fact that 20 per cent of the farm help has been lost by the draft and other causes, put squarely up to him the farmer no longer hesitates to plan on maximum production. This insures the Highways Transport Committee, identified with the national organization, that one obstacle has been overcome. In fact, it presents a condition, which, if analyzed, brings five group uses, as follows:

#### What Service Accomplishes

1. Increases the food supply by furnishing regular transportation of farm products.
2. Stimulates the farmer's efforts by the knowledge that such transportation is available.
3. Enables the farmer to avoid the driving to town, thereby increasing his time on the farm and partly compensating for the shortage of labor.
4. Enables the farmer to obtain goods from town on the day of order.
5. Facilitates traffic between the farmer, the market and the consumer.

How the motor truck is gradually replacing the horse is written on the records of the Secretary of State's office, which show that the number increased from about 3000 in 1917 to 5600 in 1918. The 1918 figure is to Nov. 1. Denver has about 2200 trucks. Many of these trucks do not leave the city or town in which the concern is located. Others make many short hauls to suburban points that in ordinary times tax the railroads' facilities and completely overwhelm traffic in war times. Other trucks are used for transportation so that horses may be kept in the fields, or the number required may be reduced. A truck will replace four horses.

#### Expect to Eliminate 1,200,000 Horses This Year

Farmers throughout the country will have in use 300,000 trucks by the end of this year and, according to estimates, will retire 1,200,000 horses. Every horse displaced means five more acres of land that can be devoted to raising food for human beings. Colorado in 1917 had 325,000 horses. The war and the advent of the motor truck have probably reduced this number. Take as a conservative estimate 200,000 horses used on farms or in transportation which, replaced by motor trucks, would mean the use of 1,000,000 acres needed to support the animals for raising food.

Three acres is required to feed a man for a year. There are 25,000,000 horses

on farms in the United States, thus requiring 125,000,000 acres to be devoted to raising oats, corn and hay. This acreage, if devoted to foodstuffs, would support nearly 42,000,000 persons. Applied to Colorado, the substitution of motor power for horses on the farm would mean the release of sufficient acreage to food for a year in excess of 300,000 persons—enough for Denver and the suburban communities.

#### Greater Use of Highways Encouraged

It is only a question of time before motor trucks will go to market with calves, turkeys, sheep, cows, potatoes, meal, wheat, corn, apples, milk and eggs. The rural motor express lines operate in some places with only one truck, in others with four or five. They have come to stay, the United States Railroad Administration, seeing a real necessity in the relief they bring, particularly on the short haulage freight.

Highways are capable of carrying enormously increased tonnage and their greater use is being advocated by the Highways Transport Committee. Good roads is the underlying basis for this greater pounding of highways, in which every city and county gets direct returns through increased business with a little less operating expense.

Statistics have been compiled that show the public, in order to get relief from expensive living costs, must be on the receiving end of the motor truck delivery. The motor truck has come to the aid of the farmer at a time when he is sorely pressed. It gives him the equivalent of man power when he cannot hire farm hands. A truck will carry twice the load in half the time.

In Colorado Return Loads Bureaus have been and are being established in all counties where highways transportation has been extended. They are operated under the direction of the sub-committees in the various county communities. Thus there are or will ultimately be several of these bureaus in every county.

The plan upon which Return Loads Bureaus operate has been fashioned to a great degree after the system employed in England, where the systematic and efficient handling of cargoes by motor trucks for short hauls has relieved the railroads to such an extent that they are able satisfactorily to render a war-time service.

There are two classes of business handled by the bureaus; one classed as regular, the other known as occasional service. The cargo carried by the return load method where shipments are occasional entails most of the detail work of the sub-committees in charge of the bureaus, as it is necessary to hear from both shipper and the truck owner daily to obtain information relating to shipments and routes.

Through the activity of the Return Loads Bureaus a truck operator in Denver can learn definitely from the bureau in Fort Collins through the Denver bureau before starting where, on what day and at what time he can obtain a load in Fort Collins to bring back to Denver.

Return Loads Bureaus in Colorado have been established in the Chambers of Commerce, Boards of Trade and other commercial organizations, business concerns and banks of the towns from which motor transportation companies are operated.

#### About 5500 Trucks in Operation

There are about 5500 motor trucks in operation throughout the State, and by the end of the year the total will reach 6000. It is safe to estimate that fully 1000 will never go beyond the city or town limits. That leaves 5000 trucks that will haul a daily average of 50,000 tons, on the basis that a truck averages 10 tons a day in the short and long hauls.

This means that from 4000 to 5000 cars on the railroads are released for other uses. Now the transport committee, in addition to stimulating the further use of trucks, expects to be able to make the 5000 trucks haul 100,000 tons



*At the recent celebration of Highways Transport Day in Denver, Col., the State and Nation were well represented. The parade of 300 loaded trucks was headed by the Fort Logan Band, the band wagon being driven by members of the Red Cross Women's Motor Corps*

daily, if possible, by the establishment of more Return Load Bureaus.

The construction of a hard-surfaced north and south highway through Colorado would mean much in the rapid transportation of products and foodstuffs from outlying communities into such centers as Greeley, Longmont, Fort Collins, Denver, Colorado Springs, Pueblo and Trinidad. Part of this proposed highway is already completed, the thoroughfare answering either for the purpose of military maneuver of troops or equipment, or for the delivery to concentration points along the railroads of perishable products.

Potatoes that weighed into the thousands of tons were lost to the Greeley, San Luis Valley and western slope districts a year ago for lack of proper transportation facilities. If these potatoes could have been hauled for a reasonable distance by motor trucks to railroad junction points, the loss would have been greatly reduced. Apples also brought losses to Western Slope growers last year because the crops were bountiful and the railroad movement inadequate to care for the shipments within a limited period.

Motor trucks are now a part of the

transportation equipment of every community, and the transport committee is urging that to increase transport capacity these trucks should operate continuously under full loads as far as possible. Shippers are urged to co-operate with the Return Load Bureaus, giving as much advance notice as possible so that the bureau may notify those in other cities in time to arrange for loads for motor trucks on return trips.

The committee is also asking co-operation from the manufacturers, merchants and others interested in the shipment of materials and supplies of all kinds, calling attention to the great service unselfishly rendered by these bureaus. The expenses of each bureau are cared for by the local community or organization where the bureau is located.

Rapid development, over fixed routes, of daily power vehicle service with definite schedules of stops and charges and provision made for gathering shipments both on outgoing and incoming trips, is not far away in the estimation of many big shippers. Once established, these lines, with the proper care of the roads brought home as never before, will continue long after the war is ended and peace prevails.

points where traffic is accepted or delivered so that the shipper may have full knowledge of the rates he is to be charged for transportation. Nor may the operator depart in the least from the rates thus filed until they may have been changed on the legal thirty days' notice.

In addition to filing the rates the operator must file his schedule of operation showing the number of trips proposed to be made per day or week, the departing and arriving time, and must adhere to the filed schedule. Changes may, of course, be made in the schedule as conditions change, but notice must be given by posting revised schedules to notify the patrons or shippers and by filing with the public utilities commission.

#### No Regulations Now

The existing law, however, provides for no regulation over automobiles which do not operate in competition with the railroads or street railways. Thus the automobiles which operate in rural motor express service between inland towns or between such points and stations on railroads do not come within the purview of the law and are unable to obtain the benefit of the protection from needless competition. The coming legislature should be petitioned to pass a bill providing for the complete regulation of automobile transportation lines within the State, regardless of points of origin or destination, that the operators thereof may receive the protection to which they are entitled and that the shippers may be assured of the reliability of the operators and the stability of rates and schedules of operation.

It will be the aim of the Highways Transport Committee to support such proposed legislation to further the permanent system of motor transportation lines in Colorado.

#### N. A. D. A. Bulletin in Mails

ST. LOUIS, Dec. 1.—The first issue of the N. A. D. A. Bulletin, under the editorship of Harry G. Mook, Manager of the Association, will be in the mails within a few days. Manager Mook has one request to make. Any member who does not receive this forthcoming issue of the Bulletin, or who has not received the bulletins in the past, will please write to him at once.

It has developed that because of the separation of the work between the St. Louis and Milwaukee offices there has been some errors in the mailing list. Mook is anxious that every firm that has become a member of the N. A. D. A. be on the mailing list and the only way to get there is write in.

During the last two weeks a wire bulletin service to secretaries of local associations has been established. The wires sent out gave definite information as to the national tax rulings, the show situation and similar items as reported from the proper authorities. Any local secretary not receiving this information is asked to communicate with Manager Mook.

## Rural Motor Rates and Legislation in Colorado

THE principal factor affecting the operation of rural motor transportation lines, according to the view of the operator, is that of protection afforded by the law from needless and ruinous competition. According to the shipper the most important factors are those of reasonable rates, rapidity of delivery and continuity of service. All are requisite factors and of equal importance.

The operator or owner of motor trucks will hesitate to enter a field in which he is not assured protection from unnecessary competition and the loss of his capital thus invested. Assured of such protection he will be in a position to render capable and efficient service in transporting commodities between cities, towns and rural communities.

At the present time the Colorado law provides that a certificate of public convenience and necessity shall be procured from the public utilities commission and each automobile carrier before operations are begun, when the route is between fixed points and furnished transportation similar to that afforded by railroad or street railways and in competition therewith.

When an application is made to the commission for such certificate the person or corporation applying sets out the proposed route over which it is desired to operate, the class of equipment to be used, the schedule of rates to be charged and the schedule of operation.

If there are no motor transportation lines in operation between the communi-

ties to and from which the person desires to operate it is quite evident that the public convenience and necessity require, or will require, the proposed operations.

Once the owner or operator of the transportation line has received such a certificate he is free from unnecessary competition, for no other line may commence operations between the same points until a similar certificate is issued.

If the person first inaugurating the service under a certificate is responsible and amply able to provide equipment to take care of a growth in the traffic handled, then the public convenience and necessity do not require the operation of a second line and the certificate is not issued.

Upon the certificate being secured the person is required to file his schedule of rates for either passenger or freight service, or both, as the case may be. The law then provides that no change may be made in these rates so filed except upon thirty days' notice to the commission and the public.

This is so that the public may have ample notice of any proposed changes in rates and to protest the same if they appear unreasonably high. In case two lines are in operation between the same points, it results in the prevention of rate cutting on the part of one without the knowledge of the other.

When a schedule of rates is filed the operator must post such rates at the



## Philadelphia to Hold Trade "Jubilee Week"

**Car, Truck and Accessories Dealers to Join in Celebrating Reconstruction Work**

PHILADELPHIA, Nov. 30.—Beginning Saturday, Dec. 7, and extending until Saturday, Dec. 14, every line of automobile activity in this city will participate in an "Automobile Jubilee Week" celebration. The celebration will be observed by passenger car, motor truck, accessory and allied dealers alike, and will be under the sponsorship of the Philadelphia Automobile Trade Association.

This "reconstruction" movement was decided upon at a special meeting of the Automobile Trade Association by unanimous resolution. It was the result of a talk held by a group of members of the trade at a luncheon in the association's quarters at Broad and Callowhill streets. It was so heartily indorsed that a telephone message was sent to the membership for a special meeting. About 50 members responded, representing different lines in the industry.

The decision was a surprise even to A. E. Malthy, president of the association, who had just returned from a western trip, and he knew nothing of the plans until he was called upon to open the meeting.

Then member after member expressed the view that the trade owed it to itself to let the public know that a reconstruc-

tive effort is on in earnest and that it is doing business "at the same old stand" on a peace footing.

The exact form that the jubilee will take has not yet been fully decided. The following committee was appointed to take it up:

L. S. Bowers, chairman; Harry B. Harper, secretary; J. S. Gomery, treasurer; Herbert S. Taylor and W. A. Almy. These members will work among the trade to boom and fully explain the movement as in the interest of the industry as a whole.

Many enthusiastic pledges to support the movement were received, and indications are that it will have 100 per cent indorsement.

### Gibson to Sell Moline Tractor

INDIANAPOLIS, IND., Dec. 2.—The Gibson-Overland Co. has taken on the distribution of the Moline Universal tractor in this territory. This company is and has been for a long time distributor of Willys-Overland cars and the tractor merchandising will be pushed in conjunction with and in addition to this line.

### Borg & Beck Start Third Plant

CHICAGO, Dec. 2.—Borg & Beck, Moline and Galesburg, Ill., manufacturers of clutches for motor vehicles, have opened a third plant in Chicago. The plants in Moline and Galesburg are producing 10,000 per month. The firm is behind in orders and it became imperative that a third plant be opened. When the latter is in operation, it is planned to produce 3000 per day as the combined output.

## Fordson Distributors to Air Differences

**May Seek Higher Commissions and Privilege of Directing Own Policies**

DETROIT, Nov. 30.—A conference of the State and district distributors of the Fordson tractor has been called for Dec. 5 and 6 at Dearborn, this automatically canceling the distributors' meeting which had been scheduled for Chicago on Dec. 2, 3 and 4. Plans for the coming year will be discussed and the trade policies of Henry Ford & Son fixed as to the handling of the Fordson business during 1919.

It is expected that the chief topic of discussion will be the trade discount which shall be given to the Fordson dealer. This is just now a trifle over 11 per cent, and many of the dealers contend that this is too low in consideration of the necessary amount of service that must be given with the tractors. The dealers will seek to have the rate raised to that allowed on Ford cars.

The summons to Dearborn on practically the same dates that the distributors had decided on their own meeting lends weight to the belief that Henry Ford is not entirely in accord with the purposes of the association and there are some men in the association that chafe under the Dearborn dictation and who seek to operate their own businesses without Dearborn supervision.



Members of Charlotte Automotive Trade Association, Charlotte, N. C., and some of the dealer visitors President F. W. A. Vesper and Executive Secretary E. E. Peake of the National Automobile Dealers' Association standing in front row, are J. T. Madden, president Charlotte Automotive Trade Association; E. E. Peake, Charlotte Automotive Trade Association; and C. C. Coddington, Charlotte, N. C., Buick distributor for North



## Boston Dealers to Decide on Motor Show

### Lack of Proper Accommodations and Attitude of Makers Worrying Managers

BOSTON, Nov. 30—The question as to whether or not Boston will have a motor show will be decided at a meeting to be called by President J. H. MacAlman of the Boston Automobile Dealers' Association, just as soon as Chester I. Campbell, who is in the government service, returns from the West. Campbell is manager of the show, and for some months he has been staging exhibitions for the government. Last week he was at Little Rock, Ark., working his way East, but he could not give any definite date as to when he would reach the Hub.

Meanwhile the dealers are talking the matter over among themselves and many of them want the show. There are two problems to be ironed out. First, Mechanic's Building has been leased to the Government for the Tufts College Army Training Corps. And unless the building is vacated in time for a show, many dealers believe it would not be worth while to hold it in any other building. There is no other building large enough to stage a decent show.

The other factor is what will be the attitude of the motor manufacturers who have branches in Boston. That N. A. C. C. has voted against shows for next

year. Therefore some of the branch managers at Boston and the men handling big lines are in doubt whether they would be allowed to exhibit. If the White, Winton and Locomobile, for example, took that attitude, it would mean three big sections in Grand Hall which year after year had attractive exhibitions would be filled with other makes. If some of the other big makers like Nash, Reo, Pierce, Cadillac, Peerless, Packard, Overland, Hudson, Chalmers, Chandler, Velie, Buick, Oakland, Studebaker, Maxwell, Dodge, Marmon, Cole, etc., should request their dealers to respect the vote of the N. A. C. C. the show might just as well be called off. Boston has always had a dealer's show, however, and it is doubtful if the manufacturers would interfere with it, the dealers believe, unless they sought to discourage shows in all cities, and then Boston would come under the list.

### 24-Hour Tire Service in St. Louis

ST. LOUIS, Dec. 1—The tire service companies of this city are again advertising 24-hour service. But the doors have not been thrown wide open. The group of tire service companies at Grand and Lindell—four of them—have organized a co-operative service so that calls to any one of the stores will be answered but each company will not have full crews on duty. Also several of the accessory stores have announced that they will be open from 7 a. m. to 11 p. m. So far no store is reported as having decided to keep open the full 24 hours as they once did.

## Truck Owners to Confer at Philadelphia

### Speakers of National Prominence Will Explain Approved Methods of Truck Operation

PHILADELPHIA, Nov. 29—On Dec. 11 and 12, at the Hotel Adelphia, a Truck Owners' Conference will be held, at which approved methods of truck operation will be explained and shown in moving pictures for the benefit of local motor truck haulers.

This will be the eighth conference of the kind in the country and Philadelphia gets the benefit of the improvements already effected in seven other large cities. A complete survey of the manner in which trucks are operated in this city will be taken for the benefit of the next city on the list. Speakers of national prominence in motor expressing and intercity hauling will address the conference.

### Cole Price Reduction of \$300

INDIANAPOLIS, Nov. 30—The Cole Motor Car Co. has reduced prices on all models of the Aero-Eight, effective at once. New and former prices follow:

Model	New Price	Old Price
871, roadster.....	\$2,595	\$2,895
872, 4-passenger.....	2,595	2,895
870, 7-passenger.....	2,595	2,895
Sedan .....	3,595	3,895
Limousine .....	3,695	3,995
Coupe .....	3,795	4,095
Town car .....	3,795	4,095



from North and South Carolina points, who were in Charlotte on Nov. 19, on the occasion of the visit of ciation, who were guests of the Charlotte Automotive Trade Association. Reading from left to right, executive secretary, N. A. D. A.; F. W. A. Vesper, president, N. A. D. A.; G. J. Mitchell, active secretary, and South Carolina, and one of the largest and most successful distributors in the South.

# Car Situation Perplexes Dealers

*Kansas Public Expects Price Reductions—Used Cars Suffer a Sharp Decline—Trade Waiting For Things to Settle*

KANSAS CITY, Nov. 29—Only one thing is checking a greatly increased volume of sales of new and used cars in Kansas City territory:

Uncertainty as to the prices.

Dealers say that the public evidently expects a sharp reduction in prices. This expectation has already caused a marked decline in used-car values, some dealers assert—and these dealers are unloading their used cars.

The attitudes of dealers are as various as there are temperaments and conditions. But they may be summarized thus:

On new cars—

1. Dealers who are going ahead aggressively, as though there would be no change in prices for 10 months.

2. Dealers who are going ahead slowly, cautiously, pending factory announcements, or other stabilizer.

3. Dealers who are sitting tight, waiting.

On used cars—

1. Dealers who are receiving used cars only on consignment.

2. Dealers who are not pushing business, waiting for stabilizing of conditions; meanwhile selling at profit.

3. Dealers who are liquidating stocks of used cars and accessories, to have clean shelves and floors when a drop comes.

In Kansas City and surrounding territory many dealers are waiting for a settling down of conditions, especially as to price, without any uneasiness. These are dealers who have efficient service stations.

"Our extra efforts on service have brought us in so much business, and our elimination of free service, and installation of more efficient methods, have made this branch of work so profitable that we can afford to wait until the uncertainty as to prices is removed and until new cars are available."

This statement has been made by several dealers, both in Kansas City and in smaller towns. G. T. O'Maley, Ford dealer in Kansas City, one who spoke that way, remarked that the dealer who had given special attention to service, with an ambition to promote transportation during the war, would be very foolish to begin worrying now over the arrival or prices of new cars.

Martin F. Groom, vice-president of the A-B-D Motor Co., Chandler dealer, was representative of the dealers who are going ahead aggressively. "We feel sure there will be no change in prices for at least 10 months—and are starting right now to sell cars."

Another group is confident that there will be very few sales and little demand before the annual show—and these are not planning or making any particular effort to sell cars now.

Many dealers have the point of view

of the public—that a reduction in price may be expected. And these are taking the position that they cannot afford to sell cars at present prices, in view of the prejudice to their popularity if prices should drop in the next month or so.

"From the day that Austria quit we have been receiving telephone calls for cars; the inquiries have increased markedly since Germany quit," said C. B. Magill, manager of the Dort Sales Co., distributor of the Dort. "The influenza epidemic has been the chief source of sales depression, and I do not believe that the price situation has cost our dealers any sales, although the dealers are naturally a little anxious."

"Our dealers are eager to get cars, and are selling them," said A. J. Brechtel,

branch manager for Studebaker. Brechtel took the price-bull by the horns Nov. 22 and sent a letter to all his dealers, pointing out why prices, generally, cannot fall materially for some time—and guaranteeing the dealer against a reduction in price on Studebakers before March 1, 1919.

A. W. Daley, retail Nash dealer in Kansas City, reported used-car sales in the past three weeks ahead of any three-month period in a year and a half. He is going ahead conservatively in sales of new and used cars, and is determined that he will not sell any used cars below the figure he has put on them heretofore.

"I was on the point of pressing my dealers to take cars and get busy," said one distributor, "when the announcement of some price reductions was made. Now, I am going to wait, until my company makes a definite announcement—I don't want to load up the dealer. Some cars are going out, however, to dealers who are making sales, or who feel the necessity of keeping in the game and being ready when the uncertainty is removed."

## Loaned Battery Losses to Stop

*Kansas City Battery Association Agrees to Require a Deposit on Batteries Loan'd While Repairs Are Being Made*

KANSAS CITY, Nov. 29—Kansas City battery men are going to help the customers to be honest. They are inaugurating a system of deposits on batteries provided while the owners' batteries are being repaired. The deposit will be required of practically everybody, so that there will be no discrimination, and no good customer can kick.

The plan was adopted at a recent meeting of the Kansas City Battery Association, when experiences were exchanged as to the number of good batteries, belonging to stations, that customers have retained, the old ones that had been left for repairs being uncalled for. Some stations have lost as many as eight in two months.

But, in Kansas City, the battery men have got many of their rental batteries back again. Each station has its mark, either the firm name or an insignia, which other battery men recognize. When a battery man gets into his shop a battery with another station's mark on it, he immediately calls up the firm which lent the battery, and holds the battery for the latter's action. Usually a replevin suit is brought, but in nearly every case, when the car owner is notified that his "theft"—for it is theft—has been discovered, he comes across with the money to pay the costs of the replevin proceedings, pays the repair charges and other costs, sheepishly surrenders the rental battery and takes back his old one that the station has been holding.

While many batteries are recovered by

this process it is troublesome. Frequently the car owner gives a fictitious name or wrong address, and even when the battery is finally uncovered in another station it is difficult to get action. Sometimes the car owner leaves town. The safe way is to get a deposit, and this is what the Kansas City battery men will do.

"We have discovered that our judgment is not always a good guide in extending credit," said H. S. Gardner, manager of the Mid-West Storage Battery Co., president of the Kansas City Association. "Usually the value of the customer's motor car and the condition of the battery he brings in are sufficient indexes as to whether he should have credit. Frequently the battery is left by a chauffeur or garageman and the owner denies knowledge of the transaction. There are too many chances—we have all lost money—and we are getting onto a safe basis."

The Kansas City Association, instead of weakening on conservation items with the ending of the war, is adding this new feature. The association adopted the restricted time schedule before the general announcement of it was made, and is continuing the practice of closing nights, Sundays and holidays. No credit is extended, except in a certain class of special cases, on battery work. Several of the members are eager to do all possible to put the business on the right basis, and suits will be brought if necessary to make the public aware that the battery men will stand for no foolishness.

## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

**L. C. Sprague** has been appointed assistant secretary of the Chicago Pneumatic Tool Co., Chicago.

**Raymond Wice**, St. Louis, who was one of the last men accepted for the Officers' Training School at Camp Pike, Ark., has been released and is again on the staff of the Hudson-Phillips Motor Car Co. at St. Louis.

**Sam E. Selvers**, St. Louis, recently an unlicensed Ford dealer there, has been made salesmanager for the Melitto Auto Co. of that city, distributor of the U. S. trucks.

**C. E. Golder**, assistant manager of the Garford Branch in Chicago, has been made manager of the Garford branch in St. Louis, vice W. E. Rehbein, who joins the C. M. C. staff in St. Louis.

**P. S. Anderson**, St. Louis, who became a lieutenant in the Motor Transport Division, has obtained his discharge and has resumed his former position as salesmanager for the Packard Missouri Motor Co.

**Earl Moore**, St. Louis, has been made salesmanager for the Superior Motor Car Co. of that city.

**S. R. Jones**, prominent in motor selling in St. Louis for several years, has been made strict manager for the Moon Motor Car Co. in Eastern Missouri and Central and Southern Illinois, with headquarters in St. Louis.

**Pablo Homs** has been appointed assistant foreign salesmanager for The Cleveland Tractor Co., Cleveland, with offices at 44 Whitehall Street, New York.

**S. E. Cole** has been appointed manager of the Omaha branch of the H. W. Johns-Manville Co. He succeeds Chas. F. Simms, deceased.

**R. M. McConnel**, formerly connected with the Firestone Tire & Rubber Co. at the Detroit branch, has arrived in Washington to represent the Motor and Accessories Manufacturers' Association. McConnel will be the point of contact for the manufacturers in the Association with the Government.

**E. T. Sutton**, district manager of the Denby Motor Truck Co., has been transferred to Cleveland, and will travel in Ohio, Kentucky, West Virginia and parts of Pennsylvania and Virginia. His headquarters are with the Ohio Oldsmobile Co.

**Martin Holbrook**, for years connected with the express business, is now with the Adams Mach. & Mfg. Co., Mobile Ala., in charge of the sales department for Bethlehem trucks, Fordson tractors and Lalley light plants.

**H. P. Lindley**, formerly in the accessory business in St. Louis but recently in Indianapolis, has returned to St. Louis as city salesmanager for the motor accessories department of the Campbell Iron Co.

**A. J. Brechtel**, for three months manager of the Des Moines branch of the Studebaker Co., has succeeded Earl R. Carpenter as manager of the Kansas City branch of the same company. Brechtel was formerly at the factory. Mr. Carpenter is now manager of the Los Angeles Studebaker branch.



**Harrison Goldsmith**

*New secretary and business manager  
of the Rocky Mountain Auto Trades  
Association*

### Tractor Schools for New York

**NEW YORK, Dec. 2.**—The New York State Food Commission will conduct a number of tractor schools this winter in various parts of the state, and the Department of Rural Engineering, the College of Agriculture and various tractor companies will co-operate in making the schools a success. Any one, man or woman, can become an enrolled student at any of these schools, which will each last 5 days, Monday to Friday, with sessions from 9 to 5. The course will take up the principles of construction and operation of farm tractors, and students completing the course should be able to operate and adjust tractors and plows, but are not expected to become accomplished repairmen. The schools are under the direction of Calvin J. Huson, Director of the Bureau of Production, and F. G. Behrends, Superintendent of Farm Machinery. The dates and places scheduled are:

Dec. 2-6—Utica.  
Dec. 9-13—Barker.  
Dec. 16-20—Plattsburg.  
Jan. 6-10—Saratoga-Newark.  
Jan. 13-17—Cattaraugus-Trumansburg.  
Jan. 20-24—Poughkeepsie-Syracuse.  
Jan. 27-31—Hornell-Waterloo.  
Feb. 3-7—Middletown-Rochester.  
Feb. 17-21—Warsaw-Penn Yan.  
Feb. 24-28—Binghamton-Buffalo.  
Mar. 3-7—Batavia-Canandaigua.  
Mar. 10-14—Oneonta-Mt. Morris.

### San Antonio Dealers Organize

**SAN ANTONIO, TEXAS, Nov. 30.**—The San Antonio Automobile Trade Association has been incorporated here. The first board of directors consists of W. A. Williamson, H. L. Miller, J. F. Hagan, Leon Walthall, W. M. Morgan, T. A. Tirado, Louis H. Tyler, William Steinhardt, Raymond Keller, J. T. Jamison, L. D. Ormsby and L. F. Birdsong.

## Asks War Board to Return to Peace Basis

### Industry Requests Baruch to Read-just War Contracts—Says He Favors Generous Treatment

**WASHINGTON, Nov. 29.**—Bernard M. Baruch has stated that the War Industries Board will continue all maximum prices on steel, copper, lumber and other commodities that have been established until the date originally set in the Price Fixing Orders. As those dates approach the board will consider the wisdom of extending the period of price control or removing that control. Mr. Baruch stated also that the automobile industry presented a memorandum through Hugh Chalmers last week informing him that it had gone forward with the plan of having the industry on a strictly war basis by January, but he now asks the board to allow the industry to retract its steps and go back to a peace basis. The industry, Mr. Baruch said, asked a generous adjustment of war contracts, and he stated while the War Industries Board has no control over these adjustments, he is in favor of generous treatment and will urge that the cancellation of Government contracts be slow and conservative. Mr. Baruch also advised the continuation of some permanent Government agency, such as the Department of Commerce, over control of industrial conservation for peace times similar to the work performed by the War Industries Board during the war.

### Allis-Chalmers Has a New Tractor

**MILWAUKEE, WIS., Dec. 2.**—The Allis-Chalmers Mfg. Co. is now building a low priced tractor listing at \$790. This concern has been building a 10-18 tractor for several years and the line has been enlarged to include this new 6-12 type called the "Allis-Chalmers General Purpose Tractor" and also a 15-30 model. The 6-12 has a 4-cylinder vertical engine, 3½-in. bore, 4½-in. stroke and the entire tractor weighs only 1850 lb. It is practically a two-wheeler with a small supporting wheel under the driver's seat.

### Record U. S. Rubber Earnings

**NEW YORK CITY, Nov. 30.**—The United States Rubber Co. established record earnings during the 6 months ended June 30, 1918, when it earned \$21.64 a share on outstanding common stock amounting to \$36,000,000. The extraordinary record which has been made is indicated by the fact that during the entire year of 1917 the company earned only at the rate of \$28.77 per share. At the present time the current assets exceed the current liabilities by three and one-half to one, despite the fact that the company has charged off nearly half a million dollars more for war taxes during the first 6 months of the year than it did for the full year of 1917.

## California Has Surplus of 1918 Cars on Hand

**Rush to Unload in Anticipation of New Models or Lower Prices Results in Price Cutting**

LOS ANGELES, Nov. 29—Because of the number of new passenger cars in storage here and the uncertainty on the part of distributors as to what will be the policy of the factories on prices when production is resumed, price cutting is being resorted to in the effort to dispose of the accumulated stock.

Inquiry has shown that there are hundreds more new cars in warehouses in Los Angeles than anyone not acquainted with the facts was aware of and it is to move these in advance of the announcement of changed models that the distributors are resorting to price reduction.

In anticipation of a long period without cars, distributors bought heavily. Some kept trains of flat or gondola cars under lease running back and forth between the factories and headquarters here bringing out as many cars as they could induce the factories to spare them.

The consequence was that there are several warehouses in the city packed full of automobiles. One or two firms have cars stored in as many as three different places. This is partly due to lack of accommodations in public warehouses and also to the desire of the distributors to keep competitors from learning how many cars they had on hand.

With the restoration of manufacturing, these distributors feel they are likely to get stuck with these cars on hand at a time when new cars of their line embodying changes or alterations in construction will be announced nationally by the factories.

One concrete example already is being shown by the distributor who has been compelled to announce a 1919 series, when he has an ample supply of 1918 models in storage. He frankly admits he has a big problem in merchandising confronting him and the only way out of it he can see is to cut prices on the 1918 models.

It has become a race between distributors and factories. Some of the latter, that had vast quantities of material on hand, will get under way in a short time and clamor for the distributors to take more cars. They will demand that the distributors accept cars under contracts that call for stipulated monthly shipments.

A distributor who has 400 cars in storage, which represents normal consumption for a period of several months, feels he has to get rid of these cars the best way he can and he knows no better way than to sell them at a reduced price. The factory price on many cars has been increased since the distributor stocked up, so, in reality, he does not stand to lose any actual cash, the only difference being he is out the restricted production figure established by the factory as retail list.

In addition to reducing prices on all models \$100, one dealer is equipping all open models with plate glasses in side and rear curtains without extra charge.

### Los Angeles Show Proposed

LOS ANGELES, Nov. 29—Motor car dealers here have begun to discuss the advisability of the annual show. Any thoughts of an exposition for this year had been abandoned during the progress of the war, but now that conditions are changing the matter has been broached. There is little likelihood that if any definite action favorable to a show is taken there will be a truck department as the truck dealers say they rarely benefit from such events either in sales or increasing the number of prospects. Tractors might be substituted for trucks but only one tractor dealer at this time is a member of the Motor Car Dealers' Association, and an expansion of membership to admit tractor dealers probably would be opposed by passenger car and truck men.

There undoubtedly are enough new models of passenger cars to put on a very creditable show and be assured of liberal attendance. However, one of the biggest problems would be to obtain a suitable location for the show. Last year it was held in a structure that has since been demolished and at this time there is no building available in the city large enough to house the show. This obstacle has been overcome in the past though, and if the dealers determine the show will "pay," they will go into it with their customary zest.

### Plan Roadway Legislation

WASHINGTON, Nov. 29—Indications point to the presentation of a number of bills before Congress for the establishment of highways throughout the country, and it is expected that this will be one of the important subjects at the next session. The immense value of the motor truck for rural express, postal service and as an auxiliary to railroads, the importance of highways for the development of food production and the general increased value through education and transportation accomplished by highways have been recognized by practically all the Government officials here in statements made at various times. Secretary Houston of the Department of Agriculture stated this week that reconstruction plans must include highway construction under the Federal Aid Road Act. The public highways, he said, will be a vital factor and construction should be started as soon as possible. Road building, he considers, a worthy project for employment of the surplus labor supply expected to result from demobilization of the Army.

Under the Federal Aid Road Act federal and state funds appropriated for road building and not expended because of the stoppage of construction by the war will amount this year to about \$75,000,000.

## Peace Brings Demand for Cars in Louisville

**Boom Follows Restriction Removal and Show May Be Held— Few Dealers Out of Business**

LOUISVILLE, KY., Nov. 30—Gloom has been interned on Motor Row now that the automobile manufacturers are permitted to go ahead with their regular work on a 75 per cent production basis. It is predicted that there will be a big boom in the passenger car business, limited only by the dealers' ability to get new models. The demand for automobiles increased immediately following the announcement from Washington that the restrictions had been removed. Members of the Louisville Automobile Dealers' Association will meet next month to decide whether an exposition will be held in 1919.

Only a few Louisville automobile concerns handling passenger cars went out of business during the war, and this was due mainly to the fact that members of the firms went into some branch of Uncle Sam's fighting force, no one being left to carry on the business.

All of the local dealers and distributors operated on a war basis and gave full co-operation to the Government's war regulations.

### Louisville Tire Dealers Going "Back to Business"

LOUISVILLE, Nov. 29—Two of the leading tire firms of this city—the Roy E. Warner Co. and the Quick Tire Service—have resumed opening at nights, Sundays and holidays as usual. Free road service will be given to the customers of these concerns. Announcement was made that the War Economy Board of the Council of National Defense assured them that there was no further need of restriction—to get "Back To Business." All the tire dealers carried out the Government's wishes regarding closing hours during the months the regulations were in force. It is believed that the other tire stores will follow the lead of the Warner and Quick Tire Service companies.

### Allocation of Steel Discontinued

WASHINGTON, Dec. 2—Beginning December 1 the allocation of steel was discontinued by the War Industries Board, and after that time the Government agency as well as private concerns will buy directly from the mills, according to an announcement made recently by J. Leonard Replogle, Director of Steel Products, War Industries Board. Mr. Replogle's announcement also indicates that complete relinquishment of supervision of both the steel industry and steel prices by January 1 may be expected.

## "Pre-War Service—?" "Never!" Says Vesper

### Dealers Will Not Return to "Free Service" Basis, Nor Keep Open Nights

ST. LOUIS, Dec. 2.—President F. W. A. Vesper of the N. A. D. A. was at his office here last week after what he termed a "most successful" trip through the Southeast. "The meetings we held at Charlotte, Atlanta, Jacksonville and other cities were enthusiastic and the dealers we met approved the work of the N. A. D. A. and predicted a wide field for our work. We look for good memberships from there."

"How did you find the sentiment among dealers and others for going back to the pre-war basis on service?" Motor World asked.

"In my opinion, fully 90 per cent of the dealers where I have met them in meetings are strongly opposed to going back to service without regard to cost. I do not think that most of them can again be driven into night and Sunday service, even emergency service. I am inclined to believe that the greater majority of the dealers will ignore the minority who again open their shops at night and on Sunday.

"I am led to believe that most of the tire companies, just as they have here in St. Louis, will resume night service regardless of the profit or loss. Here and there a Ford dealer has resumed night service, but I have not heard of any others doing so. I think the lesson learned as to the cost of such service will be effective."

"Motor World is told by Ford dealers who defend night service that it is necessary because of the number of trucks they serve which must be repaired at night," the correspondent suggested.

"That was not so in the day of the horse-drawn delivery wagon. I cannot recall that horseshoers ever kept open at night, nor do I recall any wagon maker who kept open at night except in rare emergencies to keep the wagons running. When they did keep open at night the owner of the vehicle knew that it was a special favor and that he would have to pay for the accommodation."

"Good service men have told Motor World that it is practically impossible to make a night service station pay," the correspondent again remarked.

"That undoubtedly is true, and every live motor dealer knows it. A requirement of a successful shop is a foreman who is well paid and who will keep things moving. Another requirement is sufficient work. Neither of these develops in the ordinary case. Usually there is not enough work to justify a sufficient salary to get the proper kind of a foreman."

Asked as to the future of the service proposition, in his opinion, President Vesper said:

"I look for early relief. I am anticipating that most of the men enlisted in the Motor Transport Corps, the last recruited, soon will be released. I think they will get back to the shops first, and most of them will be improved workmen. While in Atlanta I went through the overhauling shop there—a wonderful place, in charge of Capt. Finney, formerly president of the Richmond Association. There were 24 units of men at work there, all working intensely and subject to excellent discipline. Their experience both with the discipline and with the modern appliances which are supplied to them for their work will be greatly beneficial to the motor trade when they come back to the shops.

"In the near future the service men can begin again to rebuild their crews around competent, steady men, and be assured that they will have an adequate force each day. Recently it has been the case that a show would have a full crew of more or less incompetents one week and only half a crew the next week. It has been a trying period, but most dealers are better for the experience. They have had their discipline as well.

"I look for excellent results to the service business men from the army training."

### Case Has Tractor Service Schools

RACINE, Wis., Dec. 2.—The J. I. Case Threshing Machine Co. has scheduled 37 tractor service schools in various parts of the country for this winter in addition to the courses which the branches are conducting in their own territory. The schools last 4 days and take up details of the construction and operation of farm tractors and plows, and the courses are given to aid owners and operators to gain a more thorough and practical knowledge of tractors and their efficient application to farm work. The work outlined includes lectures, instructions and practical work on adjustments, driving, hitches, plow setting, threshing, etc. The schedule for the schools is:

- Dec. 3-7—Kansas City-Portland.
- Dec. 10-14—St. Louis-San Francisco.
- Dec. 17-21—Lincoln-Salt Lake City.
- Jan. 7-11—Minneapolis-Sioux Falls-Amarillo.
- Jan. 14-17—Des Moines-Watertown-Dallas.
- Jan. 21-24—Crowley.
- Jan. 28-31—Fargo-Harrisburg-Nashville.
- Feb. 4-7—Calgary-Syracuse-Louisville.
- Feb. 11-14—Edmonton-New York-Columbus.
- Feb. 18-21—Saskatoon-Boston-Indianapolis.
- Feb. 25-28—Regina-Lansing-Peoria.
- Mar. 4-7—Winnipeg-Madison-Chicago.
- Mar. 11-14—Oshkosh.

### Back to Business

INDIANAPOLIS, Dec. 2.—In the latest issue of the Gibsonian, a house organ and small catalog of the Gibson Co., the front cover bears the words: "The war is over. Now—Let's get busy."

## Jobbers' Convention December 16-17-18

### Cancelled Session Is Put Back on the Boards—Three Days Instead of Whole Week—No Exhibit

CHICAGO, Dec. 2.—The National Association of Automobile Accessory Jobbers will hold a convention Dec. 16, 17 and 18 in this city. It had scheduled a convention and exhibit for about Nov. 1, but dropped its plans at the request of the War Industries Board.

The directors and committees will meet the 16th, which is Monday, and the general sessions will be held the 17th and 18th. The usual practice had been to hold the convention for an entire week and such would have been the case had not the exhibit been discontinued.

### Modify Truck Order Cancellations

WASHINGTON, Nov. 29.—Owing to the fact that some of the manufacturers of commercial trucks who received orders from the Government prior to the signing of the armistice had more fabricated materials on hand than others, the wholesale cancellation of 50 per cent of all commercial truck orders which was announced last week has been slightly modified and readjusted.

In those plants where there were no or little fabricated materials found the cancellations were increased above 50 per cent, while in those where the Government found a larger amount of materials which meant greater waste of materials with the 50 per cent cancellation, the cancellations were readjusted. The amounts of regulations or increase of the cancellations was not made public by the Government.

An official stated, however, that the changes were not due to demands from abroad, from General Pershing, and were not important changes numerically.

### Puritan Gets American Ball

DETROIT, MICH., Nov. 30.—The Puritan Machine Co. has purchased from the American Ball Bearing Co., Cleveland, its entire service and repair parts business, including a complete stock of parts, tools, jigs, dies, blueprints, etc., covering all American axles manufactured prior to Jan. 1, 1918. The stock is being moved to the Detroit plant of the Puritan company.

### Olds Price Advance Rescinded

DETROIT, Nov. 29.—The Olds Motors Works, Lansing, Mich., has withdrawn the advanced prices announced about Oct. 1 last. At that time the material and war tax situation apparently justified an advance which, now that peace is here, appears unnecessary. Oldsmobile distributors, therefore, have been advised that the scale of prices in force prior to Oct. 1 last will rule.



## Coming Events

### Motor Shows

Indianapolis, Ind.	Indianapolis Auto Trade Assn.	Dec. 2-7
	John B. Orman, Manager.	
Detroit, Mich.	Detroit Automobile Dealers' Assn.	January
	H. H. Shuart, Manager.	
Milwaukee, Wis.	Milwaukee Auto Trade Assn.	January or February
	Bart J. Ruddle, Manager.	
Louisville, Ky.	Louisville Auto Dealers' Assn.	Feb. 15-22
Newark, N. J.	N. J. Auto Exhibition Co.	Feb. 15-22
	Claude Holgate, Manager.	
Minneapolis, Minn.	Minneapolis Auto Trade Assn.	Feb. 15-22
	Walter B. Wilmot, Manager.	
Des Moines, Ia.	Tenth Annual, Des Moines Automobile Dealers' Assn.	Feb. 17-22
	C. G. Van Vliet, Manager.	
So. Bethlehem, Pa.	Lehigh Valley Auto Shows Co.	
	J. L. Elliott, Manager.	
	Passenger cars	Feb. 17-24
	Trucks	Feb. 24-27
St. Louis, Mo.	St. Louis Auto Mfrs. and Dealers' Assn.	Feb. 24-28
	Robert E. Lee, Manager.	
Buffalo, N. Y.	Buffalo Automobile Dealers' Assn.	Mar. 3-8
San Francisco, Cal.	Motor Car Dealers' Assn.	Mar. 1-10
	G. A. Wahlgreen, Manager.	
Boston	Boston Automobile Dealers' Assn.	March
	Chester I. Campbell, Manager.	
Brooklyn	Brooklyn Motor Vehicle Dealers' Assn.	
	I. C. Kirkham, Manager.	
	Passenger cars	Mar. 22-29
	Trucks	Apr. 1-5
Trenton, N. J.	Trenton Auto Trade Assn.	3rd week March
	John L. Brock, Manager.	
New York	Automobile Dealers' Assn.	Probably February
	Charles A. Stewart, Manager.	
Chicago	Chicago Automobile Trade Assn.	Probably March
Philadelphia	Philadelphia Automobile Auto Trade Assn.	March
	A. L. Maltby, Manager.	
Pittsburgh	Automobile Dealers' Assn. of Pittsburgh.	March
	John J. Bell, Manager.	
Great Falls, Mont.	Montana Automobile Dealers' Assn.	March
Syracuse, N. Y.	Syracuse Automobile Dealers' Assn.	March
	Harry T. Gerdner, Manager.	
Utica, N. Y.	Utica Motor Dealers' Assn.	March
	W. W. Garrabrant, Manager.	
Cleveland, O.	Cleveland Auto Show Co.	Late March or early April
	Fred H. Caley, Manager.	
Montreal, Can.	Automobile and Used Car Exposition.	April 5-12
	T. C. Kirby, Manager.	
Bridgeport, Conn.	Auspices of City Battalion.	Not Decided
	B. B. Stelber, Manager.	
Harrisburg, Pa.	Harrisburg Motor Dealers' Assn.	Not Decided
	J. Clyde Myton, Manager.	
Hartford, Conn.	Hartford Automobile Dealers' Assn.	Not Decided
Kansas City, Mo.	Kansas City Motor Dealers' Assn.	Not Decided
	E. E. Peake, Manager.	

### Tractor Shows

Kansas City, Mo.	Fourth Annual Tractor Show, Sweeney Bldg.	Feb. 10-15
	Kansas City Tractor Club. Guy H. Hall, Sec.	
Wichita, Kan.	Annual Mid-west Tractor and Thresher Show.	Feb. 18-22
	Wichita Tractor and Thresher Club. Forum.	

### Meetings

Atlantic City, N. J.	War Emergency and Reconstruction	Dec. 3, 4, 5, 6
	Conference of the War Service Committees.	
Akron, O.	Annual Convention, Ohio Automobile Trade Assn.	Dec. 4, 5, 6
Philadelphia, Pa.	Meeting Philadelphia Automobile Trade Assn.	Dec. 9
Chicago	Convention	Dec. 16, 17, 18
	National Association of Automobile Accessory Jobbers.	
	Directors and Committees	Dec. 16
	General Sessions	Dec. 17-18
New York	Meeting, Society Automotive Engineers.	Jan. 12-14
New York	Sixteenth Annual Convention.	Feb. 25-28
	American Road Builders' Assn.	

## Tractor Schools

### Auspices New York State Food Commission

Utica	Dec. 2-6
Barker	Dec. 9-13
Plattsburg	Dec. 16-20
Saratoga	Jan. 6-10
Newark	Jan. 6-10
Cattaraugus	Jan. 13-17
Trumansburg	Jan. 13-17
Poughkeepsie	Jan. 20-24
Syracuse	Jan. 20-24
Hornell	Jan. 27-31
Waterloo	Jan. 21-31
Middletown	Feb. 3-7
Rochester	Feb. 3-7
Warsaw	Feb. 17-21
Penn Yan	Feb. 17-21
Binghamton	Feb. 24-28
Buffalo	Feb. 24-28
Batavia	Mar. 3-7
Canandaigua	Mar. 3-7
Oneonta	Mar. 10-14
Mt. Morris	Mar. 10-14

### Avery Service Schools

Dallas, Tex.	Dec. 4-6
Kansas City, Mo.	Dec. 9-11
Wichita, Kan.	Dec. 12-14
Omaha, Neb.	Dec. 16-18
Lincoln, Neb.	Dec. 19-21
Madison, Iowa	Jan. 9-11
Des Moines, Iowa	Jan. 13-15
Sioux Falls, S. D.	Jan. 16-18
Aberdeen, S. D.	Jan. 20-22
Minneapolis, Minn.	Jan. 23-25
Fargo, N. D.	Jan. 27-29
Grand Forks, N. D.	Jan. 30-Feb. 1
Billings, Mont.	Feb. 3-5
Peoria, Ill.	Feb. 13-15
Indianapolis, Ind.	Feb. 17-19
Columbus, Ohio	Feb. 20-22

### Case Service Schools

Kansas City-Portland	Dec. 3-7
St. Louis-San Francisco	Dec. 10-14
Lincoln-Salt Lake City	Dec. 17-21
Minneapolis-Sioux Falls-Amarillo	Jan. 7-11

## The Pot of Gold

(Continued from page 12)

a man came down here in November. He had concluded that he wanted to sell Oldsmobiles in his town but he did not have the money he ought to have had to start in a town of that size. But by Nov. 15 we had fixed him up with his home banker and let him have the agency in that town if he would take four cars. He did not want to, but finally it was arranged. By Dec. 15 he was back here after more cars. We had pushed him into doing business and his spirit was very high. He kept on doing business all of that winter. When we ran out of cars the other day, that man had some \$8,000 or more to the good.

"Now you would expect him to come down, take on the light plant and keep going. But he is content to rest on his savings and what little service he can pick up and wait for the cars to come back.

### Dealers Who Will Deal Scarce

"It is not much trouble to get dealers; the only trouble is getting dealers who will deal. I laughed the other day when I read in Motor World of the man who asked some one to come and see his demonstrator, and they had to climb over two boxes and much rubbish to get to it. I cannot understand why a man will pay for a machine as a demonstrator and then let it collect rust.

"To my mind, the farm light plant today presents the best selling possibilities of anything suggested for the war period, and while I have revised methods of selling it to the salesman, I have not in the least revised my ideas of what it is worth.

"WE HAVE CONCLUDED THAT THE PROPOSITION IS A BIG WINNER AND WE ARE GOING TO WIN WITH IT. WE WOULD MUCH PREFER TO TAKE OUR OLD FRIENDS ALONG, BUT IF THEY REFUSE THE POT OF GOLD THAT THEY ALWAYS HAVE HEARD WAS AT THE END OF THE RAINBOW, WE WILL HAVE TO LEAD OTHERS TO IT—FOR WE HAVE LOCATED THE POT, OF THAT WE ARE SURE."

### No Tax on Owners' Cars

WASHINGTON, Nov. 29—The Senate Finance Committee has entirely struck out the proposed federal license tax on the use of automobiles and motorcycles which range from \$10 to \$50 annually, according to horsepower, in the House bill, and from \$5 to \$25 under the plan previously adopted by the Senate Committee.

# Farm Tractors

Trade Name	Rating	Weight	Price	Traction Type	No. of Wheels or Crawlers	Engine Make	Cylinder Number	Bore and Stroke	Fuel	Normal Plow Capacity
Acme.....	12-25	6,000	\$1800	W	2	Beaver	4 4x6	Gor K	3	3
Allis-Chalmers.....	12-25	6,800	2250	C	4	Beaver	4 4x6	Gor K	2	2
Mills-Chalmers.....	10-18	4,800	1250	W	4	Ow	2 5x7	Gor K	3	3
Albright.....	14-23	5,000	1595	W	4	Beaver	4 4x6	K	3	3
American.....	15-30	4,975	1595	W	4	Beaver	4 4x6	K	3	3
Andrews.....	12-20	5,250	1000	W	3	Vercac	4 4x6	G & K	2-3	2-3
Appleton.....	12-20	4,900	1000	W	4	Buda	4 4x6	G & K	3	3
Atlas.....	15-26	5,100	1750	W	3	Waukesha	4 4x6	G & K	3	3
Autman-Taylor.....	16-36	7,800	1200	W	4	Waukesha	4 4x6	G & K	3	3
Autman-Taylor.....	22-45	12,500	1200	W	4	Waukesha	4 4x6	G & K	3	3
Autman-Taylor.....	30-60	23,000	1200	W	4	Waukesha	4 4x6	G & K	3	3
Austin.....	5-10	750	W & C	W	2	LeROI	4 3x4	Gor K	1	1
Austin.....	12-20	3,500	W & C	W	2	Buffalo	4 4x6	Gor K	2-3	2-3
Austin.....	15-30	4,500	W & C	W	2	Assoc.Mfrs.	4 4x6	Gor K	3-4	3-4
Austin.....	20-40	4,000	W & C	W	2	Automatic	4 4x6	Gor K	4-6	4-6
Auto Tiller.....	75-125	25,000	365	C	2	Buffalo	6 7x9	Gor K	1	1
Avery.....	5-10	850	255	W	2	Ow	1 5x7	Gor K	2	2
Avery.....	8-16	4,900	W	W	4	Ow	4 3x4	G & K	2	2
Avery.....	8-16	4,900	W	W	4	Ow	2 5x6	G & K	2	2
Avery.....	12-25	7,500	W	W	4	Ow	2 5x6	G & K	2	2
Avery.....	18-36	9,250	W	W	4	Ow	4 5x6	G & K	4	4
Avery.....	25-50	12,000	W	W	4	Ow	4 6x7	G & K	4	4
Avery.....	40-80	22,000	W	W	4	Ow	4 7x8	G & K	10	10
Bates Steel Mule.....	12-20	4,300	1340	C	2	Erd	4 4x6	G & K	3-4	3-4
Bean Track Pull.....	6-10	3,200	285	W	1	Ow	1 3x4	D	2	2
Benjamin.....	11-4	285	1600	C	1	Ow	4 6x6	D	2	2
Best Blatral.....	12-20	4,500	1100	W & C	2	Waukesha	4 7x9	D	2	2
Best Backlayer.....	38-73	28,000	5750	W & C	2	Ow	4 7x9	D	2	2
Blumberg.....	9-18	2,450	850	W	4	Ow	4 3x4	D	2	2
Blumberg.....	12-24	3,400	1455	W	3	Waukesha	4 4x6	Gor K	2	2
Blumberg.....	15-30	3,550	1455	W	3	Waukesha	4 4x6	Gor K	2	2
Boas.....	15-30	3,900	W	W	3	Model	4 5x7	K	3	3
Boas.....	20-40	4,600	W	W	3	Field	4 5x7	K	3	3
Brillon.....	12-22	4,900	5500	C	2	Automatic	4 6x8	Gor K	3	3
Buckeye.....	24-32	21,000	6000	C	2	Automatic	4 7x9	Gor K	3	3
Buckeye.....	34-42	25,000	1075	W	3	Toro	2 5x7	K	3	3
Bull.....	12-24	5,000	1075	W	3	Ow	2 5x7	K	3	3
Case.....	10-18	3,400	1225	W	3	Ow	4 3x5	K	2-3	2-3
Case.....	10-26	5,000	1225	W	3	Ow	4 4x6	K	3	3
Case.....	15-27	5,600	1600	W	3	Ow	4 4x6	K	3	3
Case.....	20-40	12,700	3000	W	4	Ow	2 8x6	K	2-3	2-3
Case.....	20-40	12,700	3000	W	4	Ow	2 8x6	K	2-3	2-3
Case.....	30-60	25,800	3500	W	4	Ow	2 8x6	K	3	3
Case.....	30-60	25,800	3500	W	4	Ow	2 8x6	K	3	3

ABBREVIATIONS—"W" Wheel, "C" Crawler, "Dr" Drum, "G" Gasoline, "K" Kerosene, "D" Distillate. Flow capacity varies in relation to operating conditions. Figures are based on 14 in. plows.

# Trucks



Passenger  
Cars

## MOTOR WORLD GUIDE

Passenger  
Cars

Model	Motor	Ignition	Starting Lighting	WB	Three Rims	2- Pam.	6- Pam.	7- Pam.
ALLEN 41	4-3125	Conn	A-Lite	112 32x2 1/2	88	1200	1700	
AMERICAN B	4-3125	A-Kent	Went	122 32x4	88	1835	1705	1865
ANDERSON 30	6-3125	Conn	Wells	120 32x4	88	1675	1750	
400-F	6-3125	Boech	Wells	120 32x4	88	12450		
APPLETON 4-18	6-3125	Remy	Bijur	120 32x4	88	12800	12800	14000
ATURN	6-3125	Remy	Bijur	120 32x4	88	1500	1500	1750
4-3125	6-3125	Remy	Bijur	120 32x4	88	1500	1500	1750
4-3125	6-3125	Remy	Bijur	120 32x4	88	1500	1500	1750
BELL 4-3125	6-3125	Remy	Bijur	120 32x4	88	1500	1500	1750
4-3125	6-3125	Remy	Bijur	120 32x4	88	1500	1500	1750
BIDDLE H	4-3125	A-Kent	Dyneto	114 31x4	QD	1145		
BRISCOE B-24	4-3125	Emmas	G & D	121 32x4	QD	2700		1750
BUICK H-44	4-3125	Conn	A-Lite	104 30x2 1/2	C	885	885	
H-46	6-3125	Delco	Delco	118 34x4	88	1505	1505	
H-48	6-3125	Delco	Delco	124 34x4 1/2	88			1895
CADILLAC 67	8-3125	Delco	Delco	125 35x5	88	3220	3220	3220
CASE U	6-3125	Wells	Wells	125 35x4 1/2	88	12100	2100	2100
CHALMERS 6-30	6-3125	Remy	Wells	117 32x4	88	1645	1645	
CHANDLER	6-3125	Boech	Wells	123 34x4	88	12095	2175	2095
CHEVROLET 490	4-3125	Remy	A-Lite	102 30x2 1/2	C	715	725	
FA	4-3125	Remy	A-Lite	108 32x4	88	1045	1045	
D	6-3125	Remy	A-Lite	120 34x4	88		1685	
COLE 870	6-3125	Delco	Delco	127 33x5	88	2505	2505	2595
COLUMBIA C-40	6-3125	A-Kent	W.Land	115 32x4		11505	1650	
CROW-ELKHART CE-36	4-3125	Conn	Dyneto	114 32x2 1/2	88	1095	1155	1095
DANIELS DAVIS	8-3125	Wells	Wells	127 34x4 1/2	QDR	3750	3750	3750
H-1	6-3125	Delco	Delco	119 34x4		1685	1685	
J-1	6-3125	Delco	Delco	125 34x4 1/2		2060	2060	
DIXIE FLYER LS-3	4-3125	Conn	Dyneto	112 32x2 1/2	88	1095	1095	
DODGE BROTHERS 4-3125	4-3125	Own	N.E.	114 32x2 1/2	88	965	965	
DORRIS 4-30	6-4	Boech	Wells	122 35x5	88		3500	
DORT 11	4-3125	Conn	Wells	105 30x2 1/2	QD	1985	985	
ELCAR D.F.	4-3125	A-Kent	Dyneto	116 32x4	88	1175	1175	
ELGIN H	6-3125	Wagner	Wagner	118 33x4	88		1395	
EMPIRE 50-51	4-3125	Conn	A-Lite	115 32x4	88	1105	1245	1475
72	6-3125	Conn	A-Lite	120 34x4	88		1445	1475
73	6-3125	Conn	A-Lite	120 34x4	88		1445	1475
ESSEX 73	6-3125	Conn	A-Lite	120 34x4	88		1445	1475
FORD A	4-3125	Delco	Delco	104 32x4		1395		
FRANKLIN T	4-3125	Own	W.Land	100 30x2 1/2	C	500	535	
9	6-3125	A-Kent	Dyneto	115 32x4	88	2400	2450	12450
GRANT G	6-3	Remy	Wagner	114 32x2 1/2		1245	1245	
HARBOUT 30	4-3125	A-Kent	Remy	106 30x2 1/2		995		
HAYNER 40	6-3125	Remy	L-N	127 35x4 1/2	88	11950	1900	1950
HOLLER 306	6-3125	Remy	Split	116 32x4	88	1455		
188	6-3125	A-Kent	Split	116 34x4	88	11855	1355	
HUDSON Super-6	6-3125	Delco	Delco	125 34x4 1/2	88	12200	2200	
HUPMOBILE R	4-3125	A-Kent	Bijur	112 33x4		1600	1500	
JACKSON 340	6-3125	A-Lite	A-Lite	118 34x4	88	11405	1405	1570
JONES 37-28	6-3125	Remy	Wells	126 32x4 1/2	88	2000	2100	2100
JORDAN J-40	6-3125	Delco	Bijur	127 32x4 1/2	88	12775	2775	
KING F	6-3125	A-Kent	Bijur	120 34x4	88		2370	
KISSEL 100-74	6-3125	Remy	Own	117 34x4	88	11644	1644	1644
LEXINGTON 6-0	6-3125	Conn	Wells	122 34x4 1/2	QD		1485	
LIBERTY 10-B	6-3125	Delco	Delco	115 32x4	88	1570	1570	1570
LOCOMOBILE E-36	6-4125	Boech	Wells	139 37x5	QD	15700	5500	5500
E-48	6-4125	Boech	Wells	142 37x5	QD	16700	6600	6600
LOZIER 84	4-4125	Boech	G & D	120 35x4 1/2	88		1905	
82	6-3125	Emmas	G & D	122 36x4 1/2	88		2250	
MADISON 6-3125	6-3125	Remy	Remy	124 34x4	88	11485	1485	1485
MAIBOHM B	6-3125	A-Kent	Wagner	116 32x2 1/2	88	1290	1320	
MARMON 24	6-3125	Boech	Bijur	136 32x4 1/2	QD	19350	3900	3950
MAXWELL 25	4-3125	A-Kent	Stunns	109 30x2 1/2	C	1395	895	
MCPHARLAN Series 4	6-4125	Magneto	Wells	136 35x5	QD	4300	4300	4300
MERCER D-40	6-3125	Conn	U.S.L.	132 34x4 1/2	QD	14500	4500	
MITCHELL C-42	6-3125	Remy	Remy	120 32x4	88	1465	1465	
MOULINE-KNIGHT G	6-3125	Conn	A-Lite	118 34x4	88	12000	2000	2000
MONROE M-3	4-3	Conn	A-Lite	98 31x2 1/2	QD	685	1325	
M-4	4-3125	Conn	A-Lite	115 32x2 1/2	QD		995	
MOON 6-30	6-3125	Delco	Wagner	125 35x4 1/2	88	1455		
6-48	6-3125	Delco	Delco	125 35x4 1/2	88	15500		2500
MURRAY 6-3125	6-3125	Dirle	Wells	128 34x4 1/2		2800	2800	2800
NASH 6-3125	6-3125	Delco	Delco	127 34x4	88	11490	1490	
6-3125	6-3125	Delco	Delco	127 34x4	88	11490	1490	
NATIONAL 6-3125	6-3125	Delco	Wells	128 34x4 1/2	QDR	12450	12450	2450
6-3125	6-3125	Delco	Bijur	128 34x4 1/2	QDR	12150	1650	2650
OAKLAND 6-3125	6-3125	Remy	Remy	122 32x4	88	1185		

Abbreviations: "A-Kent" Avon Kent, "A-Lite" Auto-Lite, "Boech" Bosch, "Bijur" Bijur, "C" Carburetor, "D" Distributor, "E" Engine, "F" Fuel, "G" Gear, "H" Horn, "I" Ignition, "J" Jumper, "K" Kick, "L" Lamp, "M" Magneto, "N" Noise, "O" Oil, "P" Pump, "R" Ratchet, "S" Spark, "T" Tension, "U" Under, "V" Valve, "W" Water, "X" X-ray, "Y" Year, "Z" Zone.



# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 11

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, DECEMBER 11, 1918

Fifteen cents a copy  
Two dollars a year



## Long Tire Life Now Essential

### What Miller Offers Dealer and Public

To the dealer puzzled as to his immediate future by peace conditions—car-shortage, tire shortage and increased cost of doing business—the Miller Agency Plan comes forward with a saving answer.

Miller quality standards daily are attracting a larger share of the motoring public. The Miller public is a satisfied public, too, which means to you, Mr. Dealer, satisfied customers—steady customers.

The Miller Plan proposes to establish you as the exclusive Miller Agency within your territory. Think that feature over—an exclusive agency for a thoroughly advertised tire, the qualities of which have the strongest possible appeal.

Miller Uniform Tires represent absolutely the value of the



"Miller Quality Standards  
Mean Positive Economy"

money invested in them by the motorist. Their quality of giving long mileage—and uniform mileage is a positive factor in making for tire economy—a quality invaluable in these times when from every tire must be exacted the greatest possible length of service.

Write at once for the Miller Agency Plan while the chance is open. And think over, too, the possibilities involved in the Miller Accessories and Repair Kits as a side line now that the public knows tire conservation is essential.

## THE MILLER RUBBER COMPANY

Dept. H-85, Akron, O.



# UTILITY

## Automotive Products

### Order UTILITY Heaters NOW

More UTILITY Heaters will be sold this winter than ever, so order before cold weather sets in. Stock while you can get them, and thus avoid the possibility of winter shipment delay.

See to it that you carry a sufficient quantity of each model to meet every sale's requirement. An incomplete stock may mean lost business.

#### A MODEL FOR EVERY CAR

UTILITY Protected Heater for all cars. Price \$20.00.

UTILITY Front Seat Heater for roadsters, driving compartments of large cars and trucks. Also for rear installation on Maxwells and Chevrolets. Price \$12.50.

UTILITY, Jr., Protected Heater for Fords and other small cars. Price \$9.00.

UTILITY De Luxe Protected Heater for 8-cylinder cars. Regulated by foot adjuster. Price \$25.00.

Dealers: Order of your jobber at once  
Jobbers: Get in touch with us

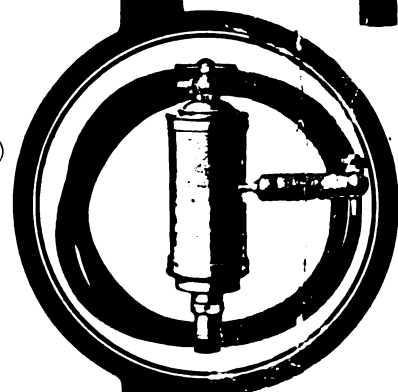
### HILL PUMP VALVE COMPANY

Mfrs. of UTILITY Products

Archer Avenue and Canal Street, Chicago

Sales Department:

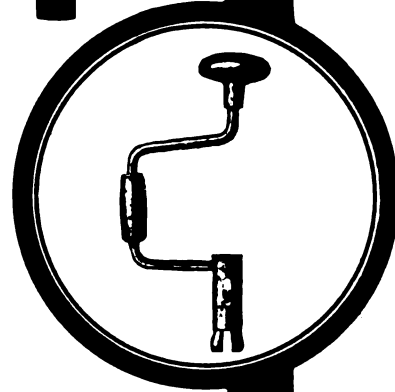
THE ZINKE CO., 1323 S. Michigan Ave., Chicago



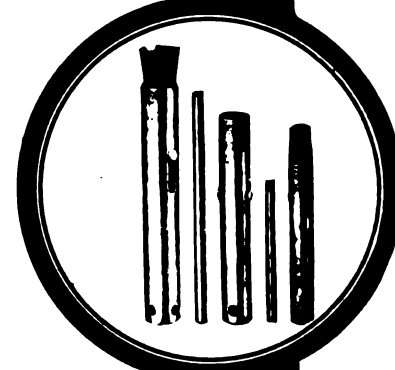
UTILITY PUMPS  
For Fords \$12.00  
For Fords \$7.50



UTILITY PEDALS  
For Fords \$1.25

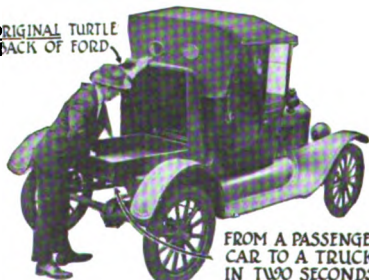


UTILITY  
RIM WRENCH  
For All Cars \$1.75



UTILITY  
UNIVERSAL WRENCH  
For All Cars \$3.50

ORIGINAL TURTLE  
BACK OF FORD



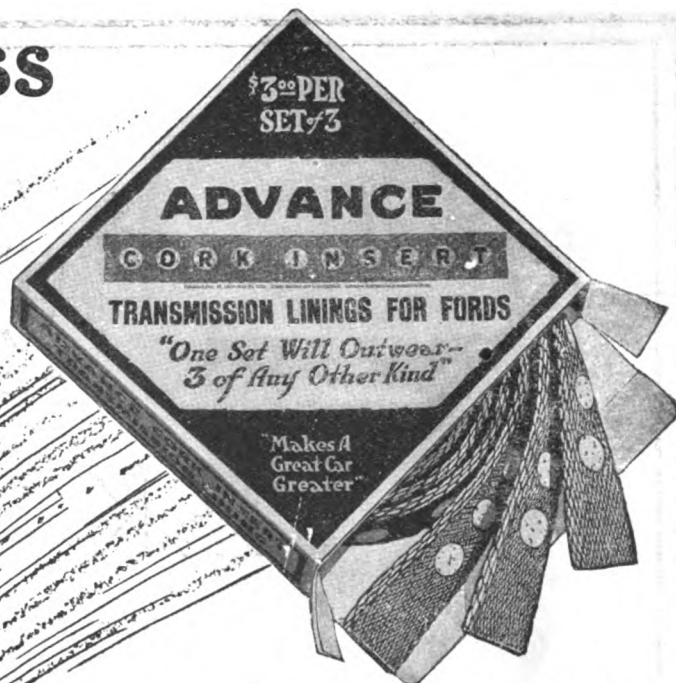
FROM A PASSENGER  
CAR TO A TRUCK  
IN TWO SECONDS

UTILITY DISAPPEARING TRUCK BODY  
For Fords. Price \$38.50

# Biggest Success

in the

# Ford Lining Field



A world's record! That's what Cork Insert made when it won a place on hundreds of thousands of Fords within a few short months. It broke all selling records because it gave a better performance than anything else ever produced—*smoother action—a safer brake—and longer wear.*

Don't forget that it is *merit* that has put Cork Insert over. There is no magic in the name or qualities of Cork. It has wonderful frictional properties. But by itself, it is utterly valueless as lining material.

*The secret of Cork Insert Service and its success is the Cork Insert Way of combining cork and lining. It's a patented way. No other lining does the work equally well.*

So look out for the imitations. They haven't the big combination idea that makes Cork Insert a success. It is easy to get Cork Insert. Most dealers sell it—any garageman will install it. Either can get it in a few hours, for all jobbers sell it.

**Advance Automobile Accessories Corp.**  
Dept. L 13-1, 56 East Randolph Street, CHICAGO



Rockies West, \$3.25—Canadian Price, \$4.50

## Smooth Action, Sure Brake, Long Wear

—that's the service that Cork Insert Transmission Lining gives. When you apply the brake, the corks hit the brake drum first. They compress gradually and ease the load down to the fabric. The light pressure required, and velvety smooth action of the buttons of cork coming in contact with the drums, means such long wear that Cork Inserts are far the cheapest in the long run.



for 1917-18 Fords  
85c for 1916 and earlier Fords

Canadian Prices: 1917-18 model, \$1.50; earlier models \$1.25

## Keeps the Ford Fan Fanning

Retards overheating. Most motor trouble is caused from overheating. This is due in no little degree to loss of driving power—estimated as high as 25% to 50%—because ordinary fan belts slip and stretch. Cork Insert Fan Belts stop the slipping. It doesn't have to be run tight to prevent slipping, like ordinary belts. This, plus its durable construction, means extra long wear and economy. Cork Insert Fan Belts outlast all others—hence economical.

# CORK INSERT

When writing advertisers please mention Motor World—it identifies you





# FISK TIRES

*Now is the time to plan  
for big things!*

**D**EALERS! The time has come to plan for big things next year.

THE PROGRESSIVE DEALER is mapping out a line of action that means expansion—more and better business.

The war has given a lot of people a chance to think, to think seriously, the first chance they have had in years, with the result that simple lessons in efficiency and economy have come home to stay.

The Sales and Distribution plans for The Fisk Rubber Company provide wide-awake, aggressive co-operation with Fisk dealers everywhere. These plans are backed by a complete and incomparable line of Fisk Solid and Pneumatic Tires, Plain and Non-Skid Treads, in either Cord or Fabric construction.

## THE FISK RUBBER COMPANY

OF N. Y.

General Offices

Chicopee Falls, Mass.

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

PUBLISHED EVERY WEDNESDAY BY

The Class Journal Co.

U. P. C. Building, 231-241 West 39th Street, New York City  
 Horace M. Swetland, President  
 W. I. Ralph, Vice-President E. M. Corey, Treasurer  
 A. B. Swetland, General Manager

**Business Department**  
 Charles B. Shanks, Manager

**Editorial Department**  
 David Becroft, Directing Editor  
 Ray W. Sherman, Editor  
 Stanley P. McMinn, Managing Editor  
 J. Howard Pile

## Branch Offices

Chicago—Mallers Bldg., 59 East Madison St., 'Phone Randolph 6960  
 Detroit—95 Fort Street, West, 'Phone Main 1351  
 Cleveland—Guardian Bldg., 'Phone Main 1142

Subscription, Per Annum (Postage Paid).....\$2.00  
 Foreign and Canadian Subscriptions.....4.00  
 Single Copies (Postage Paid).....15 Cents

## Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to MOTOR WORLD.

Cable Address, "MOTORWORLD," New York  
 Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 243 West 39th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. C. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
 Copyright, 1918, by  
 The Class Journal Co.

## Editorial Contents

Ohio Trade Association Starts Back to Business	8
5000 Business Men Shape Policy of Future Business	12
Advertising Can Build a Garage Business	14
The Reilly Story	17
Carry On	18
Better Mechanics	19
The Law	23
Repairshop Shortcuts	24
Editorial Observation	26
Letters from Readers	27
Tractor Expected to Increase Crop Acreage	30
Retail News	32
Automotive Equipment	33
Winter Business	34
Regular News Department	36
Specification Tables	
Farm Tractors	45
Trucks	46
Passenger Cars	48

Advertisers' Index on Pages 116-117

## Reasons for

**CORBIN-BROWN SPEEDOMETER**

## Supremacy



### 6 The Maximum Speed Hand

The great value of the Maximum Speed Hand lies in the fact that it enables the driver of any motor vehicle to keep his eyes on the road at all times and still obtain an accurate record of his best speed. It does away with the annoyance and risk of watching the speedometer.

The Maximum Speed Hand, an exclusive Corbin-Brown feature, is fitted as an extra. It registers the highest speed attained and stays at that point until reset to zero, which can be done instantly at any time. The speed record shows on the dial as long as you want it.

This extra hand is a great convenience to motorists in general, and to motorcyclists in particular—inasmuch as it is always risky for them to take their eyes from the road to inspect the speedometer while traveling at a fast clip.

For use on motor trucks, the Maximum Speed Hand can be locked to prevent resetting by the truck operator. This means that the record of his highest speed will remain for the consideration of the truck owner, and that there will be no overfast driving. Reduces repair bills and makes the truck good for longer life.

Use the Maximum Speed Hand once and you will never be without it. It is one of the most valuable additions ever made to the speedometer for the comfort and safety of motorists. You can obtain it only with the Corbin-Brown.

Write For Catalog

**Corbin Screw Corporation**

American Hardware Corporation, Successor

New Britain, Conn.

Branches: New York Chicago Philadelphia



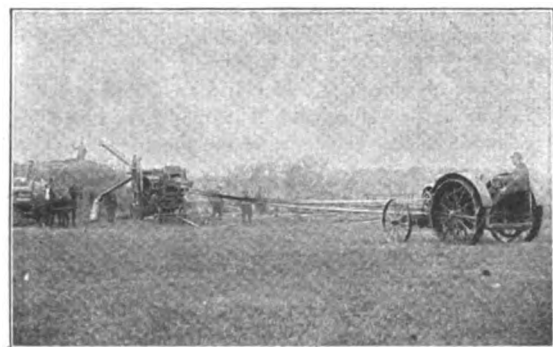
# THE HUBER Light Four



Horses cannot compete with the Huber Light Four in heavy orchard work. This Light Four works sixteen hours a day in the Fulton Orchard, Cherry Run, W. Va., and it requires only half an hour a day to take care of it, according to Mr. M. W. Fulton, the manager.



A Huber Light Four is shown here pulling a seven foot binder harvesting rye on the farm of Spencer & Barber at Paxtang, Pa. The east is rapidly following the west in its preference for power over animal haulage.



This Huber Light Four is shown operating a Huber Junior Thresher. The Huber Light Four is making good in its belt work for the many uses on the farm.

## A Big Future For Big Men—

**I**T IS difficult to estimate the future value to our dealers of the right to sell Huber Light Fours in good territories.

Last year the sales of Huber Light Fours made by our dealers were six times larger than they had been the year before.

Next year they may be six times larger again—or only four times—but the one thing that seems certain is that they are to be much larger every year for years to come.

We have been in the tractor business for 20 years—we started when it was not a business at all but only a dream. We have seen it go through the pioneering stages. We have seen the tractor slowly approach and at last attain a mechanical perfection equal to that of other machinery used on American farms.

Farmers everywhere have come to recognize it as a dependable tool. There is a most unusual shortage of farm labor. Prices of farm products are higher than they ever have been. A tremendous human demand is made for the product of the acres that have previously gone to feed horses. Farmers have more money to equip their farms than they ever have had.

Here is a set of conditions that can mean nothing but tremendous sales of tractors—and great prosperity for tractor dealers who are fortunate enough to pick the right tractor.

The Huber Light Four is already entrenched. Thousands of farmers are using it and recommending it to their friends. They find it efficient. They find it so simple that any beginner, a woman or a small boy, can operate it. Capable of doing the work of 4 men and 12 horses in one day. It pulls three bottoms and turns an acre an hour. It burns kerosene, gasoline or distillate and it is famed for economy of fuel and up-keep.

It is thoroughly tested, thoroughly tried, successful beyond question.

Its dealers have the cooperation of a 40 year old house with sales and service branches all over the country, and well developed and effective sales and advertising policies that have always secured results.

The Huber Light Four offers a big future for big men.

**Ask for all the facts.**

**The Huber Manufacturing Company**  
650 Center Street      MARION, OHIO



# NOW!

Whether you are a dealer on New York's automobile row or a garageman in Nacogdoches, Texas, there is unfolding an opportunity for profitable business that you should be thoroughly alive to.

We are released from four years of tension. Hostilities along the great battle fronts of Europe have ceased. Men who a year or two ago were not candidates for the purchase of cars and their related equipment are now able and ready to join the ranks of motorists.

During the past four years savings accounts have increased. Idleness belongs to the old order of things. This nation is going to continue its great productivity. Expanded industrial plants will be kept busy, and money will continue in free circulation during 1919.

Put your house in order. Get ready to take advantage of those opportunities that will be, and are today, rightfully yours.

Study the merchandising situation in your own territory. Study the existing and the potential needs of your own buying public. Plan to anticipate those needs. Get your merchandise stocks up to where they should be. Get set to go full speed ahead—NOW.

# Reconstruction and Ball Bearings

The reconstruction period is at hand. The wise and careful user of Ball Bearings took advantage of our unique exchange service during the period of the war. This to save steel.

Now, more than ever, the reconstructed Ahlberg Bearing is at your service. Our government requirements must be met.

We recommend that you exchange your old worn out Ball Bearings for new Ahlberg reconstructed bearings. You save steel for your government and money for yourself.

Satisfaction guaranteed.

**Ahlberg Bearing Company**  
2636 Michigan Avenue Chicago, Illinois

#### BRANCHES:

Atlanta  
Boston  
Cleveland  
Detroit

Los Angeles  
Minneapolis  
New York

Philadelphia  
Portland, Ore.  
San Francisco  
St. Louis

Authorized Remakers  
under  
Conrad Patents

## SPECIALS

# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, December 11, 1918

No. 11

## The New Business



# Ohio Automobile Trade Association

## *In Big Convention*

# Starts Back to Business

*Greatest Trade Convention of Years Held in Akron—640 Men at Banquet—Enthusiasm and Snap from Start to Finish*

By Ray W. Sherman

AKRON, Dec. 6—Ohio has started "back to business" on the run. The start was made yesterday and to-day in a convention of the Ohio Automobile Trade Association. And it was the biggest trade affair that has ever been staged in this trade, within the knowledge of all who saw the meeting.

At a banquet last night in the Armory—no hotel was big enough to hold it—640 men sat down at long tables, closely crowded together. Had they been seated at the ordinary hotel banquet round table some of them would have been out on the sidewalk.

And throughout the two days there was the most rampant enthusiasm that has characterized an automotive session in a long, long time. It was the war-repressed spirit of an active industry come back to life.

All this, mind you, was done by an association that exactly one year ago was about the deadest thing that ever happened. It would have been buried a year ago but for what was almost an accident, and to-day it is about the hottest article in association circles in the country. Any organization that beats it will have to travel some.

The how and why of this association success will be told later. For the present, let's get to the story of the convention.

It opened Wednesday with a meeting of the Ohio Automotive Equipment Jobbers' Association, which embraces all the Ohio jobbers. These men have helped make the trade association a success, wherefore they met at the same time, the day before.

Thursday morning the convention was scheduled to open at 10 o'clock in the

#### New Officers of the Ohio Automotive Equipment Jobbers Association

President, Howard M. Dine, Dine-DeWees Co., Canton.

Vice-president, J. C. Hipp, Pennsylvania Rubber & Supply Co., Cleveland.

Secretary, G. M. Bender, Union Supply Co., Toledo.

Treasurer, H. H. Brenner, I. J. Cooper Rubber Co., Cincinnati.

Next meeting: March, in Columbus.

#### New Officers of Ohio Automobile Trade Association

President, A. E. Mitzel, Canton Motor Car Co., Canton, re-elected.

First Vice-president, Andrew Auble, Jr., Akron.

Second Vice-president, Frank Girard, Columbus.

Manager, Victor Moon, Columbus. Reappointed.

Directors: Charles M. Cole, Ada; W. E. Moler, Athens; Frank Dudley, Norwalk.

arrival of the several hundred delegates from all corners of the Buckeye State.

#### Over 500 Members

After this commotion had subsided President A. E. Mitzel, to whom goes much of the credit for the success of the affair, responded to all these addresses of welcome, and then Manager Victor Moon, who also is a hard worker, read his report, which showed that the association has grown from a miserable fizzle to a membership of more than 500. Every once in a while the quartet livened things up, and the delegates joined in on familiar songs.

After lunch Thursday C. M. Hamel, secretary to H. S. Firestone, the tire maker, talked on reconstruction, and scattered some very pertinent points. Then George C. Hubbs, assistant general sales manager of Dodge Brothers, handed out some plain talk on why dealers don't and how they can make money. It was one of those talks that made men squirm in their seats and look guilty.

The next speaker was Commissioner William M. Webster, of the National Association of Automobile Accessory Jobbers, after which W. O. Rutherford, vice-president of the B. F. Goodrich Co., talked on "Organization."

That ended the day session, and at 6.30 the delegates gathered in the armory for a mysterious affair about which nothing would be told in advance. The affair proved to be a banquet followed by an entertainment. The entertainment consisted of three four-round boxing bouts, numerous vaudeville features and quite a number of songs by the house.

#### Graham the Star Speaker

The next morning B. M. Ruark, of the Champion Spark Plug Co., set forth some interesting facts on economics, and then came the surprise of the day in the shape of George M. Graham, of the Pierce-Arrow, chairman of the Motor Truck Committee of the N. A. C. C. Everyone expected him to cite a lot of truck statistics. Instead he talked for a solid

morning, and, strange as it may seem, it opened at 10 o'clock in the morning. It opened with the "Star Spangled Banner," sung by a quartet that stuck all through the two days of sessions.

Then Mayor I. S. Myers welcomed the half hundred delegates and, as is the custom, gave them the freedom of the city, restricting them only in "burglary and murder."

Next A. O. Wood, president of the Summit County Automobile Dealers' Association, which includes Akron, made a short address of welcome—and just as he was going to his seat the Youngstown delegation presented him with a big bouquet.

About the same time a flock of leather-lunged newsboys burst into the armory bellowing about an extra of the Akron Evening Times, across the top of which was "Earthquake Shakes Akron." The "quake," it seems, was occasioned by the



*The Men Who Made the Ohio Automobile Trade Association and Its Convention a Success*



**A. E. MITZEL**  
*Re-elected president of the Ohio  
Automobile Trade Association*



**VICTOR MOON**  
*Re-appointed manager of the  
Ohio Automobile Trade Association*



**HOWARD M. DINE**  
*President of the Ohio Automotive  
Equipment Jobbers' Association*



**CECIL WELKER**  
*Chairman of the committee that  
put over the Akron convention*

hour and the audience never moved—except to interrupt frequently with applause. It was the convention's star address.

At noon the delegates went out to have their picture taken, but something slipped and it didn't develop well, so the photographer called it a bad job and refused to show what it looked like.

After lunch to-day there was more quartet-ing and preliminaries and then the officers were elected. The election would have gladdened the heart of the politician who has to hunt for votes, for before the nominating committee could finish reading President A. E. Mitzel's

name for re-election the crowd was on its feet yelling for his speech of acceptance. The formality of voting was entirely unpopular. It was the same when it was recommended that little Victor Moon be re-engaged as manager, and with all the other officers.

Thereafter the convention adjourned and the delegates went to visit the rubber factories.

#### Better Business Resolutions

Before adjournment several resolutions were passed. They are printed elsewhere. They all relate to Better Business, and it was impressed upon the delegates that

voting for these resolutions means that each man should go home and live up to them. The educational value of this convention, in its resolutions and addresses, should be great in a financial way to the trade in Ohio.

The association also plans future work of benefit to its members. It is going to be bigger than ever. At the final session a sort of evangelistic session netted more than 100 new members, which gives the organization between 600 and 700.

Some idea of the growth and ideals of the organization may be gathered from the report of Manager Victor Moon, which is given herewith in part.

## How Ohio Built an Association and Staged a Record Convention

Whereas, Many soldiers are returning from war and will require employment on their return,

Be it resolved, That we, the Ohio Automobile Trade Association, pledge ourselves individually and collectively to reinstate all such employees and as many more as our organization will permit.

HAVING seen the miserable association that Ohio had one year ago and having seen what the state has to-day, one wonders how it was done. So here is the story.

The Ohio association was started several years ago, but it never got very far. A year ago it held a meeting in Columbus, and, after waiting for 24 hours to see if anybody else would show up, the promoters were about ready to go home and cry when the germ of the big organization of to-day appeared.

In the outfit was Howard M. Dine, a jobber of Canton, whose specialty is doing things that can't be done. He had summoned, for a speech, Commissioner Webster of the jobbers' association, and he arrived in time for lunch on what would have been the second day of the convention if there had been any convention the first day.

The jobbers of Ohio and Webster ate lunch together. They asked him—he being an organizer—what could be done. He said: "Very simple. You must have finances. Therefore, get some of your leaders to underwrite the proposition."

They agreed.

That afternoon Webster, it having been arranged beforehand, was persuaded to take the chair. He ran the thing with snap from then on—as he generally does.

Pretty soon some one moved that there be subscriptions to finance the association. Howard Dine jumped up with \$500 just as though he had never thought of it before that minute. In a very few minutes there were subscriptions of \$15,000 on the books—and she was off.

Whereas, Many towns and cities have dealers who practice methods unethical and unbusiness-like,

Be it resolved, That it shall be within the scope of the local organization to make effort through the State association by applying to the manufacturers for the correction or elimination of such dealers.

She was "financed."

Then there was an election. Mitzel was nominated and elected president while he was on his feet protesting that he wouldn't take it. Somehow or other Webster couldn't hear him. But, once elected, he stuck and more than made good.

That night there was a directors' meet-

Be it resolved, That the Ohio Automobile Trade Association recommends and urges the creation by Congress of a national road department with full authority to act in extending federal aid to the States and supervising improvement of highways that are of national importance, and

That the State laws be so strengthened as to permit of larger and more rapid development of the State aid system.

Whereas, The Sherman anti-trust law was passed 30 years ago and does not to-day meet the requirements of business,

Be it resolved, That the Ohio Automobile Trade Association go on record for the appeal of this law by Congress.

ing, and preliminary work was planned. All this was Dec. 5, just one year ago.

It was realized that there must be a manager who would devote his time to the work. Victor Moon was engaged. He was a modest and unassuming young man—who always had small expense accounts—and he didn't make a heavy impression, until it was realized that he was slowly but surely building a whopper of an association. Then it began to grow like a snowball.

#### Harmony Did It

Moon and Mitzel worked in harmony. Chairmen were appointed in each of the 88 counties of Ohio. The matter of holding a local meeting in a county would be taken up with the county chairman. Letters would be written and preliminary work done. Then Moon, sometimes accompanied by Mitzel, would put on a meeting in that county and organize a local association. Most of these paid local dues of \$6 and \$10 more to the State.

Within a year twenty-five of these locals have been organized in as many different sections. Every member and many prospective members have been visited individually by Moon. He has tried to hold two of these local meetings every week.

At all these meetings the tradesmen were urged to get on a cash basis and to adopt the war conservation policy of the N. A. D. A.

After organizing a local Moon would keep in touch with it through letters and bulletins and endeavor to keep things moving. Questionnaires have been sent out on many subjects, and the results re-

turned to the members through bulletins.

Realizing that it means considerable travel to attend a State meeting, the management has adopted the plan of holding sectional meetings, which make it possible for the dealer to get to a meeting and back in a short time. These have proven very successful. Three district meetings are held in each district every year.

#### The First Real Meeting

Then came the first real annual meeting, just held. The Akron association made a bid for the meeting. Cecil Welker, manager of the automotive equipment department of the Hardware & Supply Co., was made chairman of the convention committee.

Oct. 21 he appointed a general committee of four Akron dealers—A. O. Wood, Andrew Auble, Jr., A. J. Alexander and D. W. Thornton.

They estimated that it would cost \$3,000 to put on the convention and make it a big success. They had to rent the armory, hire entertainment, decorate and do other things.

They asked the rubber companies—Amazon, America, Falls, Firestone, General, Goodrich, Goodyear, India, Kelly-Springfield, Mohawk, Mason, Miller, Marathon, Star, Swinehart and Portage—if they would help. They all responded willingly and contributed not only the \$3,000—a comparatively small sum—but men to do committee work. These men helped make the convention a success.

Nov. 1 a letter was sent out to 6510 tradesmen—car dealers, garagemen, tire

Whereas, War necessities have brought to our attention the practice of economies, many of which have been of material benefit to dealers,

Be it resolved, That we, the Ohio Automobile Trade Association, endorse the present standardization of tires, as set forth by the Economy Board of the Council of National Defense,

That we endorse the continuation of progress of the economies adopted for war purposes, namely:

The elimination of unnecessary service,

The night and Sunday closing,

The cash basis,

The education of owners to the care of their own cars,

The establishment of schools for motor mechanics,

The admitting of apprentices to repairshops.

men, shop operators, etc.—on association stationery, calling attention to the meeting.

A few days later each rubber company sent a letter to its branches in Ohio.

Then each rubber company sent a letter to all its dealers in Ohio.

Also, each rubber company asked its men to locate antagonism to the association. When any friction was found an association man got on the job and ironed things out.

Each jobber, for two months before the convention, stamped all outgoing mail with a rubber stamp, furnished by the association, calling attention to the meeting.

The jobbers' salesmen also worked hard for the convention.

The association asked the car factories to urge their dealers to attend.

Finally a tickler postcard—"Something brewing in Akron"—was sent out.

It was one of the biggest and most successful pieces of propaganda ever worked in this trade. It brought a crowd. The hotels were packed.

#### Preliminary Work Paid

The well organized nature of the preliminary work prevailed all the way through. The minute a man entered the hotel door he was greeted by the reception committee—mostly men from the sales departments of the rubber factories. These men saw to it that the visitors were registered, got rooms if they could find none, and were escorted to the convention hall. The minute a stranger arrived he could feel in the way he was greeted that the affair was well organized. It had an "organized touch."

There were committees on everything—and they all worked. Manager Moon lived in Akron for a month before the meeting, despite the fact that he maintains headquarters in Columbus.

The meeting should do more than much sales work to make the association grow, for every man likes to belong to anything that smacks of success.

### Victor Moon's—*What the Ohio Association Has Been Doing*—Report

ONE of the first things done after May 1 was the establishment of a monthly bulletin for the purpose of keeping the members of the association in touch with the development of the association, and to give them other information valuable to them.

We have tried to put something in each bulletin which would help to improve the auto business.

A number has been issued each month since last May, and we expect to continue its publication. Inasmuch as we wanted to get the association and its work before as many dealers as possible, a copy of each issue has been mailed to every auto tradesman on our mailing list.

From 3500 to 4000 have been mailed out each month. Beginning with the next issue, which will be the January number, the Bulletin will be mailed to members of the association only. We want to make the bulletin a medium for the exchange of ideas among the members.

If you have devised some new shop method, some system which is a time saver, or anything else, send it to us. Your plan may seem commonplace to you, but there are probably hundreds of others who would like to know about it. Don't be afraid to send it in. If you want to buy or sell a piece of used equipment the bulletin will help you out.

Due to wartime conditions, important matters were continually coming up, and to give our members as prompt information as possible special bulletins were issued. Nine of these bulletins have been issued. The Civil Rights Bill, the Work or Fight order, War Taxes on truck attachments, bodies, accessories, etc., were some of the subjects discussed.

The special bulletins were mailed to members only.

The board of directors realized from the first the importance of local associations, and as much time as possible has been spent in helping organize local associations. One condition which is doing much, if not more than anything else, to retard the proper development of the auto industry and prevent those engaged in it to make their legitimate profit, is the enmity and lack of confidence among the dealers.

A local association will do more than anything else to eliminate this condition, and we

hope to see a good, strong local association in every county and city in the state by this time next year.

Meetings have been held in the following places: Toledo, Cincinnati, Cleveland, Athens, Portsmouth, Zanesville, Circleville, Hamilton, Dayton, Springfield, Marysville, Bellefontaine, Greenville, Ottawa, Upper Sandusky, Fremont, Clyde, Bellevue, Ashland, Steubenville, Youngstown and Defiance. Local associations have been organized in all these places except Toledo and Cleveland. In many of these places two meetings have been held. In a number of cases trips have been made where it has been impossible to hold a meeting.

A state meeting was held in Columbus, July 10, and a district meeting in Cincinnati, Sept. 11. Both these meetings were held to discuss war conditions, and able speakers were secured to give us the latest available information.

One of the most important points in our program has been the establishment of a cash basis, and if the state association had not accomplished anything more than what we have already done on this line, it would justify all the time and money expended on it. We have succeeded in putting hundreds of dealers on a cash basis, and they have been saved thousands of dollars thereby.

We expect to continue our efforts in this direction and hope that the return of peace conditions will not see them fall back to the old credit system. It is a notorious fact that the average auto tradesman is a poor business man. You can look Dun or Bradstreet through from cover to cover and you will find no other business listed so low, and yet the auto industry is the third largest in the country. The cash basis is one way to improve our business standing.

We have plenty to keep us on the go during the coming year. We expect to help establish better accounting systems, a simple and efficient cost system, better merchandising and business methods, improved shop methods, etc. The bulletin will be published monthly as heretofore, and we hope to make it more valuable than ever to our members.

The state has been divided into districts and we expect to hold three or four meetings in each district during the year. We expect to make these meetings short, snappy and

full of business. There will be closer cooperation between the state and local associations during the coming year. We shall continue to help organize local associations and hope every locality will have its organization by the next annual meeting.

We are planning to establish an employment department for the benefit of our members. There is urgent need for better mechanics, and we hope to make the employment department contribute its part to this end.

Some means should be devised to secure a better training for mechanics. During the past year schools have been established in Akron and Columbus for the training of mechanics, but some scheme should be developed which will make it possible for every section to benefit.

The war has shown us that we have wasted thousands of dollars through the junking of parts still good for service, and through selling our junk at any price the junkman offered, and at his weights. We hope to be able to keep you informed as to fair prices for waste material.

A legal department should be established to take care of legal questions arising. Some have already been submitted by members.

Good roads should be encouraged. The rural express developed. Means for reducing the number of car thefts devised.

A strong legislative committee should be appointed. We have a headlight law which is a dead letter. A new and effective law should be passed. A law making it a crime to pass a worthless check would help the auto as well as other businesses. Other important legislation will suggest itself to the committee.

During the past year we have worked conservatively and have not spent money until we had to. It has been our purpose to make the association self-supporting, and if the "flu" had not put a stop to our meetings we would have done so. Much of our work has been missionary work and has brought no direct returns to the association. The directors of the association have unselfishly given their time and money to the work and deserve great credit for what they have done. We have worked hard and under many discouragements, but feel that we have reason to be proud of what has been accomplished during the past year.

## 5,000 Business Men

# Shape Policy of Future Business

They Want Burdensome Restrictions Removed and Believe They Can Guide Themselves Without Outside Help.

By Stanley P. McMin

*If you could gather together the best business brains of the United States—and if you could then explain to these men what your individual problems are in getting back from a war to a peace basis—and if you could get the combined experience of these 5000 men to apply to your individual business—you'd do it, wouldn't you?*

*That's what the Reconstruction Conference of War Service Committees of the United States Chamber of Commerce means to you.—EDITOR.*

**A**TLANTIC CITY, Dec. 6—American business wants to be free of burdensome restriction; it wants to be free to assimilate the lessons of the war in its own way and to apply those lessons in a manner to do the most good; it believes in fair and square treatment of labor and that labor shall have a voice in its own management; it is heartily in favor of a continuation and expansion of public works and particularly of road building; it wants to see uniform accounting methods in the various industries; and it plans to go out strongly after foreign trade.

These, in brief, are the high spots—the kernel of the nut that was cracked, so to speak—at the Reconstruction Conference of War Service Committees of the United States Chamber of Commerce, brought to a close here to-day after a series of memorable sessions that gathered together more than 5000 representative business men from all over the country, and some from other countries.

From a business point of view, the conference was one of the most important that has ever been held. Coming at a time when the world strife has been brought to a close, it held up for review the problems and the accomplishments of that tumultuous period, and in the light of this experience laid plans for bigger and

better business—a readjusted business.

"There is not even standing room for a pessimist in American business to-day," said David S. Ludlum, president of the Autocar Co., Ardmore, Pa., in opening the meeting of the War Service Committee of the automobile industry.

"The immediate future holds an unparalleled opportunity for the dealer," said George M. Graham, president of the Pierce-Arrow Motor Car Co., to the same meeting.

### Prosperity Sweeping Over Country

And these two men but echoed the sentiment of the 5000 business men who gathered to talk over their mutual problems—problems which for the most part have as their basis the methods that are to be pursued in getting their share of the prosperity that will soon be sweeping over the country.

After all, the problems of business in general in so far as the readjustment period is concerned are not different in principle from those that affect the automobile industry either from the point of view of the manufacturer, the distributor or the dealer.

General business wants to know whether there is going to be any labor shortage; what to do with the great stocks of material that have been ordered by the Government and canceled or turned back to the makers; what to do about the various conservation measures that have come about as a direct result of the war; whether the industries will be able to reap the benefits of public works, and how much foreign trade we are going to get and how we are going to get it.

It was the purpose of the great conference which has just closed to name the machinery that shall carry on the work of readjustment both at home and abroad. And the naming of this machinery takes the form of a series of twenty-seven resolutions which reflect the judgment of 5000 successful men of big business. After considering these grave questions four days, they have agreed upon the best plans to be adopted, and it is these plans which it is hoped will serve to guide all industries through the reconstruction and readjustment period.

### Cancellation of War Orders

For example, the convention deems it in the public interest "that all war orders placed by any contracting agency of the Government \* \* \* should upon cancellation be promptly and equitably adjusted \* \* \* and the amount ascertained to be due by the Government should be promptly paid to the end that these funds may be utilized by the industries of the country to speed their transition from a war to a peace basis."

This means that if such action is followed, makers of trucks and other products ordered in great quantity by the Government and subsequently cancelled have little to fear. It means that they will get their money promptly so that such money may be used to help the factory get back to producing trucks for the dealers.

Another resolution on the same subject lauds the expressed sentiment of the Secretary of War, who has stated that accumulations of raw materials and finished products "will be distributed when and where liquidation of such supplies will least interfere with the return of industry to normal conditions."

### No Domestic Dislocation

According to George W. Graham, of the Pierce-Arrow Motor Car Co., there will not be any dislocation of domestic markets through the sale of Government products. He believes that trucks and cars owned by the Government and operated in France and England will never be brought back to the United States.

He bases his belief on the fact that transportation is the vital need of our Allies at present, and that with the railroads seriously handicapped by winter

weather and the waterways frozen solid, thousands of people would starve to death literally for lack of transportation. It is the trucks that are over there now which will solve this problem.

"This means," said Graham, "that the dealers of the country are presented with an unparalleled opportunity and are facing unprecedented prosperity." "The manufacturers of motor vehicles," said Graham, "must depend on the domestic market for trade. I believe that the dealers of the country have sufficient enterprise, courage and zeal to put the industry back on its feet in a period of 180 days."

"The dealers must by zeal and salesmanship replace the domestic business that has been taken by war business."

"On the ability of the dealers to distribute the product depends the ability of the maker to keep his plant busy."

#### Market Half Sold

"In 1917 there was distributed a total of 1,718,000 vehicles. The possible market in 1918 was 2,000,000 vehicles. During 1918 we have sold only 50 per cent of our market, at the same time laboring under the troubles of converting our factories 100 per cent to war work."

Graham believes that the automobile industry can best convert itself from a war to a peace basis; that outside help is neither desirable nor necessary; that the industry must have an opportunity under normal competitive conditions to work out its own salvation, and that it should not be handicapped by restrictive or conservation measures except by those which its own experience indicates are beneficial.

That similar conditions obtain in all other industries are quite forcibly brought out in a resolution which states that "it is in the public interest that all war regulations of industries should be revoked and all war restrictions on industry should be removed as speedily as practicable \* \* \*"

It is not proposed, however, to overlook the lessons which have been learned through the adoption of restrictive measures which have been brought about through intelligent co-operation. It is urged that "the nation should not forget, but rather should capitalize these lessons by adopting effective war practices to peace conditions."

#### Here Are Labor Fundamentals

The deliberations of the conference with regard to labor and the action which was taken and which represents the consensus of opinion are as applicable to the dealer, garage and repairshop industry of the United States as they are to the biggest steel man or the most important other industrial organization. They are twentieth century principles upon which depend the contentment of the workers and the production of the plant. Here they are:

"1—Labor and capital are partners, not enemies; their interests are common interests, not opposed, and neither can attain the fullest measure of prosperity at the expense of the other, but only in association with the other."

**What the country chiefly needs is that all possible means of transportation should be developed, its railways, its waterways, its highways and its country side roads.—President Wilson, from Address to Congress, Dec. 2, 1918.**

"2—The purpose of industry is quite as much to advance social well-being as material well-being, and in the pursuit of that purpose the interests of the community should be carefully considered, the well-being of the employees as respects living and working conditions should be fully guarded, management should be adequately recognized and capital should be justly compensated, and failure in any of these particulars means loss to all."

"3—Every man is entitled to an opportunity to earn a living, to fair wages, to reasonable hours of work and proper working conditions, to a decent home, to the opportunity to play, to learn, to worship and to love as well as to toil, and the responsibility rests as heavily upon industry as upon government or society to see that these conditions and opportunities prevail."

"4—Industry, efficiency and initiative, wherever found, should be encouraged and adequately rewarded, and indolence, indifference and restriction of production should be discountenanced."

"5—The provision of adequate means for uncovering grievances and promptly adjusting them is of fundamental importance to the successful conduct of industry."

"6—The most potent measure in bringing about industrial harmony and prosperity is adequate representation of the parties in interest; existing forms of representation should be carefully studied and availed of in so far as they may be found to have merit and adaptable to the peculiar conditions in the various industries."

#### Must Have Right Principles

"7—The application of right principles never fails to affect right relations; the letter killeth and the spirit maketh us alive; FORMS ARE WHOLLY SECONDARY, WHILE ATTITUDE AND SPIRIT ARE ALL IMPORTANT, and only as the parties in industry are animated by the spirit of fair play, justice to all and brotherhood, will any plans which they may mutually work out succeed."

"8—That man renders the greatest social service who so co-operates in the organization of industry as to afford to the largest number of men the greatest opportunity for self-development and the enjoyment of every man of those benefits which his own work adds to the wealth of civilization."

Although no definite action was taken by the conference as a whole advocating the building and maintenance of good roads, it was obvious that this thought was uppermost in the minds of many of the delegates.

As a matter of fact, a great many of

the individual war service committees adopted resolutions at their meetings urging the creation of a separate highways department for the maintenance and building of national roads. The automobile groups strongly advocated such procedure, as did the highway group.

#### Favor More Roads

Roads are only superficially included in one of the resolutions, which states that "the development of public works of every sort as recommended by the president should promptly be resumed, in order that opportunities of employment may be created for unskilled labor." And inasmuch as the president has openly advocated good roads as an economic necessity the resolution is significant.

The matter of foreign trade was one of absorbing and sustaining interest to the gathering. It is believed that there are great possibilities in its development and that the continuation of the Merchant Marine program must be effected to assist American industries to compete with their foreign rivals. The convention went on record as very strongly favoring the appointment of a commission of American business men to be sent immediately to England to be available for consultation in the solution of those problems of trade readjustment which must of necessity come before the peace conference.

"In order to contribute promptly to the fullest toward the solutions of the problems presented, the Chamber of Commerce of the United States is requested to enlist the co-operation of national bodies devoted to the extension and promotion of American commerce, and particularly foreign trade in the appointment of a commission representative of American business, which shall proceed without delay to Europe \* \* \*," says a resolution.

Another one: "We strongly urge upon our Government the vital necessity of encouraging and developing our foreign trade through all appropriate means possible \* \* \*."

"We believe that our relations should be supplemented and strengthened by a vigorous development of our commercial and financial associations with our neighbors of North and South America," says still another.

So that the United States may be in the best possible position to take advantage of its future foreign trade possibilities, the conference adopted a resolution that industries should "take steps to provide opportunities to young men to obtain an education in the practices of overseas commerce and finance and in the practical use of foreign languages."





*The location of the Manross Garage is one of its greatest advertising features. It stands on a curve in the street so that it is squarely in front of the approaching motorist*

# Advertising Can Build a Garage Business

*Here Is a Garageman Who Did It—He Tells How*

Let's Hear from Other Successful Advertising Garagemen

**C**ONCRETE evidence that judicious advertising pays the garageman is given in abundance by the Overland Manross Co., garage operator and car dealer, in an average way in an average small city—Bristol, Conn.

An interesting experiment has been tried out conclusively by this company and it should prove to all doubting Thomases that *advertising does pay, and pays a handsome return if correctly attended to.*

This experiment consisted in mailing a questionnaire to the car owners of the district. A card was enclosed for the reply and the returns have justified the expense of mailing and printing.

And these replies have been convincing to the general manager of this garage, Earl J. Arnold. For they have backed up his claim that *even a garage could advertise to a*

*certain degree and get handsome returns.* In fact this young garage manager believes that there is hardly any limit to advertising—providing you have the organization and equipment to back up your well-prepared ads.

The vulcanizing department of this company was started about four months ago and it was destined to be a failure—so thought many, for there was a large vulcanizing station nearby, an old one with a reputation. But a campaign of advertising was decided upon, Arnold feeling sure that his many garage customers and his list of patrons of the mechanical department would also be glad to avail themselves of the proposed vulcanizing service.

At once Manager Arnold started his postcard form of advertising, also using the daily papers. He had already had his vulcanizer, a former garageman of ability, take a course

in the finest school in Connecticut. The postcards commenced to reach the car owners of the district and as a result business began to come immediately.

The competitor undertook to reply to one of Arnold's ads, telling of a "new process of vulcanizing," by stating that his method was the old steam method and therefore the best. Arnold replied, tellingly admitting that steam was the best, but adding that the method of preparing the casing for vulcanizing and the manner of doing the work gave the Manross company the "New Method."

And customers came and kept coming with their work, so that now the vulcanizer cannot keep up with his work and he has had to call for assistance.

The matter of retreads for tire work is even more of a brilliant success for advertising. This work was discouraged by many who have had tire experience, but Arnold's vulcanizer had been trained in a school where they considered retreading a great success, and the result

## Combating the Influenza Epidemic OR MEETING AN EMERGENCY

A corporation that has been building for two years an organization so complete in all its allied lines as to present one plant where all details of service to cars can be provided under one roof.

**That's the Manross Garage.**

An organization so perfect that when a sudden emergency calls for quick service and satisfactory service in order that the health of a community may be attended to quickly.

**That's the Manross Garage.**

A well balanced group of mechanics so trained as to work quickly to the end that no delay may be experienced in getting on their way cars of physicians and nurses, and also those attending to the dead, the undertakers.

**That's the Manross Garage.**

A business house that with the splendid co-operation of its faithful employees worked days, then continued the working hours into the midnight vigil, and all day long Sunday to the end that cars and attendants to the sick, as well as the dead, could keep running and working.

**That's the Manross Garage.**

A garage, complete in all details, with battery room, vulcanizing department, and a wonderful store of skilled mechanics, and an organization ready for quick service when life and death are at stake.

**That's the Manross Garage.**

**THE GARAGE THAT HAS MET, AND IS CONTINUING TO  
MEET THE PRESENT EMERGENCY**

TO PASSENGER CAR OWNERS:—

Due to conditions we ask consideration, if during the present epidemic we have to ask a few days extra time to complete your work. We are striving to give good service to all owners, but the more attending to the sick have first attention. Likewise those taking care of the dead. And also the trucks doing government work as well as those doing general work. It's the Government's wish. We in you will see the point.

Telephone 909-910

Bristol

## WHO EVER SENT HIS WATCH TO A BLACKSMITH?

And had him pry out and scatter the works to see if the hair-spring needed adjusting?

It is just as ridiculous to permit the ordinary garage man to knock down and reassemble your starting and lighting system, in fond hope that he will in course of three or four days, happen on what is wrong with it. But the

**NYSTROM GARAGE, Inc.**

are not "ordinary garage men." By our recent installation of the AMBU Trouble Shooter, we have made ourselves master automobile electricians.

AMBU is the new, remarkable device that you have read about in the news sections of the "Horseless Age," "Motor Age," "The Automobile Journal," "World's Work," and "Popular Mechanics." As the various articles in these publications pointed out, it definitely locates any trouble in your starting and lighting equipment in one-fifth of the time usually consumed by the "If I look long-enough, maybe TLL-find-it" method.

You save therefore, the cost of 4 to 20 hours of mechanic's time per garage visit on account of electrical system trouble.

For head scratching getwork, the

**NYSTROM GARAGE, Inc.**

substitute AMBU, the systematic, scientific trouble locator. With this remarkable "electric detective" we are prepared to render an electrical repair service that is equal to any obtainable in either Hartford or New York.

And **WE** want to prove it.

We'll be glad to talk over and explain this wonderful machine and its workings, at any time during the next week. We are convinced that we can save you money, and incidentally, build good-will and bigger business for ourselves.

Call on us—See AMBU—Talk it over with "Dr." Jack Moran the leading electrical expert of this section of Connecticut.

The two—"Dr." Moran and AMBU, make a combination hard to beat.

Yours very truly,

**NYSTROM GARAGE, Incorporated**

Center Church and School Streets, Bristol, Conn. Telephone 909

P. S. Visit us in our new, three story, fire-proof garage.

## A NEW POLICY

On and after June 1st the Nystrom Garage, Inc., now located at 51 Church Street, will inaugurate a new policy regarding payment for labor, parts and materials.

Commencing June 1st payment for oil, gasoline, materials and labor, will be on a cash basis.

We have many accounts that are not so monthly payment ones, but we cannot play favorites, we shall ask all patrons of this service station to conform to the new rule.

This cash payment rule will be in keeping with that established by the and most successful garages. It will enable us to render a more complete service, carry a greater stock, and give the expert service that is demanded of a Ford Service Station.

We solicit your patronage on this new basis.

## LEST YOU FORGET

Wash your car if you wish to get and service out of it. Don't neglect the little inspections and adjustments.

- |   |  |
|---|--|
| 1. Storage battery inspected every two weeks                                | 16. Valves ground every 100 miles                                |
| 2. Grease cups turned up every 100 miles                                    | 17. New piston rings every 100 miles                             |
| 3. Grease cups turned up every 100 miles                                    | 18. See that the water in radiator is changed every 100 miles    |
| 4. Oil and grease inspected every week                                      | 19. Inspect bearings on wheels every 100 miles                   |
| 5. Oil and grease inspected every week                                      | 20. Inspect steering wheel and steering knuckles every 100 miles |
| 6. Check over drained and washed out with hose every 100 miles              | 21. Inspect spark plugs every 100 miles                          |
| 7. Differential and transmission packed with grease or oil every 1000 miles | 22. Inspect shock absorbers every 1000 miles                     |
| 8. Spark plugs checked every 1000 miles                                     | 23. Inspect brake and rear axle every 1000 miles                 |
| 9. Carbon removed from cylinders, valves a year                             |  |

We are equipped to give you prompt and intelligent service in having your car tuned up right.

**Overland Manross Garage**

Telephone 909

75 SCHOOL ST., BRISTOL, CONN.

## STEAM VULCANIZING

The Old Reliable way of Tire Repairing has proven to be the most satisfactory. By steam vulcanizing there is no danger of overheating or burning your tire. This fact we have learned, as have others, from years of experience.

Our advice to our many customers is—do not experiment with any new heating idea. Steam vulcanizing is best. That is why we use this method. Tires cost too much to experiment with. After an experience of nine years in vulcanizing and associated automobile work, our vulcanizer, Mr. G. A. Chappell, has just completed an intensive course of instruction under Connecticut's leading vulcanizer, and tire repairman.

## ..THE NEW METHOD..

Our new method does not consist in any heating idea, but simply in anchoring the vulcanizing section and in also presenting the finest sectional work after the work is done. We want you, as a tire owner to be the judge. Our customers know of our good work, more are soon to learn of the merit of the new method of tire repairing, and soon the auto owners of the country roundabout here will be heralding the satisfaction obtained from having vulcanizing done at the Manross Garage.

## Overland Manross Garage

Phone 909 and 910

School Street

Bristol, Conn.

L. Kott left our employ three months ago. He is no longer connected with this garage in any manner. G. A. Chappell, expert vulcanizer, is in charge.

## Have Your Automobile Shoes "Tapped"

**Educate yourself in the care  
of your tires**

If you have a good pair of shoes you don't wait till the soles are more ragged. No sir! But just as soon as they show worn badly you hand them to the shoemaker for new soles.

**TREAT YOUR AUTOMOBILE SHOES**

the same way. When they show worn badly and the tread is beginning to wear through, don't go on and wear them down to more rag and run the risk of spalling good rubber by blow-outs. But rather take them to a

**A Good "Shoemaker"**

and have new "soles" put on. For don't you know that those "spoppers" of your automobile tire are probably worth such attention?

**Mr. G. A. Chappell**

in charge of our complete vulcanizing department, and a growing department by the way, is a good "shoemaker."

Bring your tires to him and he will advise you as to what you should do with them. If they are worth retreading, he will tell you so, and he will be ready to care for your tires in a scientific manner. And he will give you back a tire in all its essential as good as new. For remember, this retread will be built up with the same material and the same amount of such as the factory put on your tire when it was being built as new.

**Help Win this War**

By having your tires retread you are helping to win this war, because the government needs all the fabric it can get. Fabric of all grades and kinds. And the amount in that old casing that you would "junk" is worth saving. It is not the scarcity of rubber but the great government need of fabric that makes the tire situation serious. So help Uncle Sam by helping yourself.

**Around 3,000 Miles**

is what you should get from your retread tire. Others get it, why shouldn't you? We can give you a Goodyear All-weather tread, a Royal Cord tread of the United States line, or other treads of equal strength.

**Talk It Over**

with Mr. Chappell. Come in and see some of the work done. Hear what other Bristol motorists are getting from their retread tires.

**Overland Manross Garage**

75 School St. Tel. 909 Bristol, Conn.

These are a few of the forms of advertising used by the Manross Garage. Many of these are mailing cards, about 5 x 8, to which a stamp is affixed and the card mailed to the prospect list. Others are newspaper advertising. There are other names than "Manross Garage" on these cards, which is because several businesses were recently merged under the Manross name

was that the Manross company backed up the retreading business until now they have a great business in retreading tires.

Customers are more than satisfied with the work. One customer recently gave Arnold a job, a 37 x 5 casing that is retreaded at a price of \$24. This customer is a prominent citizen of Bristol, and at the time he gave Arnold the casing he had a 37 x 5 retreaded casing on his front wheel that had already gone 3000 miles and was good for many more. Also he had two spares in covers on his rear that were also retreads. Another customer—and, by the way, this man was a customer of another garage—came and had a retread and then gave another tire for the same kind of work.

The battery business was built up by advertising. Manager Arnold says: "Talk about advertising being a paying proposition! All I have to do is to cite what this company has accomplished in a direct way in two or three departments.

#### Advertising Stimulated Battery Business

"Take our battery department. We started our battery room in the worst time of the year, coming into it about Dec. 10. We had done a very small amount of battery work a few months previous to December of that awful closed winter of 1917-18. But we were determined to succeed and we commenced to sink the money into an advertising campaign for our battery department. And work commenced to come.

"We had one of the lesser known batteries, but we succeeded in getting the business until to-day what do we find? Why we have the battery business of our district—practically all car owners in our district come to us for battery service and attention. We have the best battery man in this section and have just added an assistant and we also have a third man on part-time work. The outlook for this winter is wonderful.

"We cannot say too much for our advertising and the results that it brings us. This is still more true of our vulcanizing department, which has practically been established on a paying basis by a well planned advertising campaign. We have also extended our advertising to our mechanical end and all departments that we have put advertising money into have paid."

#### Well Prepared "Copy" Interests Customers

The advertising work has not been developed to any great extent on the car sales end. But the results in other departments are so conclusive that Arnold says he thinks it will be but a short time before the directors of his corporation will desire to have a similar campaign carried out in the sales end. Customers become interested in well prepared advertisements and, while many of them may become matter for the waste basket, there are enough returns gained to pay a handsome profit on the printer's ink.

One customer replied to Arnold's questionnaire as to whether he had been attracted by the advertising of the com-

pany by replying: "Keep advertising and advertising will keep you." This customer has become a battery, tire and mechanical customer of the garage and is coming in this winter for storage.

One of the replies received by Arnold from his questionnaire sent out to car owners was very pleasing to him, coming as it did from the head of a progressive manufacturing concern of his district. It was written by a man who is careful of the statements he makes and very accurate in all that he gives out over his signature. His reply was:

#### Ads That Suggest the Company

*"Regarding your advertising, I am sure this card would suggest your company to me when I was in need of battery service. Also your tire ads suggest my looking you up in case of tire emergencies, and your general publicity regarding service of experts for each different detail of automobile mechanism is of the kind that would be apt to secure a lodgment in my mind in such a way as to fulfill the publicity end you seek."*

Manager Arnold says about this letter: "The best thing is that this man who is so careful about giving out testimonials has given us a considerable part of his business. We have just closed with him for a nice piece of tire business. And this can be traced right to our vulcanizing department and the advertising. Yes, we have got to give our advertising the credit for a lot of good-paying business. What kind of advertising is used? Well, it is not the kind that you buy. It is Bristol-made by a Bristol man."

#### A "Combination" Advertisement

That does not mean that good ideas are not taken hold of. Arnold tells of one of his best advertisements having been a combination affair. The Maxwell company put out a good ad about the "Fighting American dollar" having upon it an eagle, not an ostrich. This was used together with local material for his garage, and Arnold published it in his local paper. Then he had copies struck off. These were sent to customers and other friends. One came to the attention of the United States Tire Company, as the advertisement featured U. S. tires. This big company used it in the trade journal of the Hartford district—the district in which Bristol is located—and it was thus sent to many places.

More recently the garage has used a timely advertisement that recounted the kind of service given during the severe epidemic of Spanish influenza that visited Bristol while it held such awful sway in Connecticut. Arnold concocted an advertisement that recounted the facts of service given day and night, and the special service rendered doctors, nurses, Red Cross workers and undertakers.

The people of Bristol realized that the big organization that had been forming as the Overland Manross Co. had finally had an opportunity to make itself felt as a power for good in its community, and Arnold let the people of his

district know the fact by an advertisement in his local paper.

Many would not have considered such an item. They would rather have recounted how the doctor and the nurses and the undertaker had given wonderful time and service in the emergency but would have forgotten all about the over-worked garageman who kept his place open day and night and even worked his over-tired mechanics Sunday to the end that the Good Samaritans could keep on their way, and to the end that the dead might be given decent burial. The mechanics, realizing the need, gladly worked, but they were given credit for it in the advertisement that Arnold prepared.

Another good stunt used was one that, was copied from the Lake George region. "All any one with a newspaperman's nose for news or an advertiser's idea of what is good dope for copy has got to do," says Arnold, "is to keep his eyes open and his ears to the ground. If he hears people tell how they are attracted to certain merchandise he can guess in what way to reach them. And if he sees a good stunt pulled off somewhere he can return to his home town and he need not, or should not at least, be afraid to copy. Put the good idea into practice and he can get results.

"That's what I did when I was touring about Lake George. I saw a lot of little wood signs nailed up to trees, ten of them on each side of the town of Lake George. The first board gives the numerals '1, 2, 3, 4, 5, 6, 7, 8, 9, 10.' Then comes No. 1 with some such saying as No. 1—Keep going. No. 2—Don't ask. No. 3—American. No. 4—Go ahead. No. 5—1 mile. No. 6—To what? And so on up to No. 10, which gives the name of a hotel. I returned to my home town and after a while got busy and put out ten signs on each side of Bristol.

#### Attracted Unusual Attention

"That sign work has been a very clever piece of publicity. It has attracted unusual attention. What mattered it to me if one of the town's big manufacturers drove in smiling a few days ago and said: 'Arnold, who gave you the right to plagiarize?' Well, I knew in a minute what he meant, for he is a man of great discernment and he had just returned from a tour, and, being a manufacturer, that probably meant he would choose some big place like the Lake George region. So I tumbled in a minute and said: 'You have just returned from a trip to Lake George,' and he replied that he had, and then he said he thought it was a good scheme, and that the members of his party had noticed my signs immediately that they came to them and linked them up with that pleasure trip they were returning from.

"That advertising will stay with that man for some time. Besides we have had any number of people tell us of their interest in those small signs."

In addition to post card advertising, which Arnold says has paid his company the best returns, he uses much newspaper space and the road-side sign boards.

# Apologize to Yourself—Not to Your Boss

## EXCUSES NEVER CAN TAKE THE PLACE OF RESULTS

By Ray W. Sherman

**Y**OUNG ROPER aspired to fame and fortune—but he had found neither yet.

He had been listed in the sales organization of C. J. Reilly, Inc., the Sennett dealer in Callawassa, for some time, but he hadn't yet got to the point where he could feel safe in inviting the only young woman in the world to the fine stucco-and-shingles mansion of which he had dreamed. To date the dream was more or less in a three-and-a-bath stage.

Wherefore, Roper tore madly back and forth across the pathway of life and wondered why he didn't go farther in an onward direction. Sometimes Reilly felt like inviting Roper to get off the pathway entirely and give a fast man some room.

### He Couldn't Make It

There was a worried look in Roper's eyes as he hurried into the salesroom and across the floor to the offices of Tommy Trumbull, sales manager, and Reilly, boss, which were made almost one by connecting doors—seldom closed.

"Well—did you land her?" was Tommy's greeting.

"No—couldn't make it," replied Roper.

"That's too bad."

"Yes—I felt sure I'd get her. But, you see, Mrs. Dunn likes the car and all that, she isn't fussy about a trade-in price, but she says she wouldn't sign an order without the approval of her husband. She says her husband will have to buy the car—and that's all there is to it."

"Huh!" sported Tommy.

"I suppose I might have followed her right up on that point and jammed through an appointment with her husband at the office—or with both of them at the house this evening—but I thought—"

### Lacked Self-Reliance

"You thought what?"

"I thought—I thought—I hesitated about being too aggressive for fear it might gum the works."

"In other words," Tommy added, "you knew what you ought to do but you didn't do it."

"Well—maybe."

"Roper—why didn't you do that?"

"I DON'T KNOW!" and with that

Roper slammed his hat on the desk in lieu of kicking himself and flopped into a chair.

"I KNOW!" and Tommy leaned convincingly across the desk.

"Well—why?"

"Because you aren't master of yourself. You want me to be the master. And I don't want to be your master. All I want is results—not excuses and apologies. I want to be your helper, not your master. I want to give you a start on sales and help you through, but I want YOU to do the fighting out on the line and bring home the trophies, and I'm not interested in the slightest in why you don't make good. Results, Roper, results are what we want in this office—NOT apologies."

Roper tamed down under the arraignment.

"I know just what you did," Tommy continued, and Roper looked amazed. "You let yourself fall down and then figured out that you would come to me and we would patch the thing up some way or other and you would go on selling and some day make a sale. No need for you to tell me it's true or isn't true. I know it's true—because I used to do it myself."

### Wanted—Nerve

"You get up to the point where you know what the next step ought to be and you don't take it. You are not master of yourself. You don't drive yourself. You let yourself be a shirker—and then you come to me and make excuses."

"What can I do?" pleaded the young salesman.

"I'll tell you what to do," Tommy snapped. "Instead of coming in here and telling your excuses to me tell them to yourself. You know as well as I know that when you come in here with a tale of failure and woe I'm going to be disappointed in your work. You also know I'm going to ask you all about what happened and that then I'll point out to you what you should have done. But you know beforehand, just as well as I do, what should be done, so why should you come in here and have all this conversation with me and waste my time?"

"Instead of coming to me, and trying to make me play the part of master, take the thing up with yourself. Sit down on

a curbstone somewhere and talk the sale over with yourself. Find out what you should have done—and then go and do it. Drive yourself. Make yourself have backbone. Make yourself work. Many a man has driven himself to success in spite of himself, simply because he figured out what he ought to do and then went ahead and did it, even though he knew he didn't have nerve enough to do it.

### Needs Push

"The world is full of people, Roper, who never get anywhere simply because they don't do the things they know they ought to do. They don't need knowledge. They need push. A man once told me that any man could go through to big success if he would only do the things he ALREADY KNEW he ought to do and stop doing the things he ALREADY KNEW he ought not to do.

"And that's about all there is to it, Roper. You KNOW what you ought to do, but you don't do it. You KNOW whether you've done a hundred per cent job or not. You KNOW what to do every time, but you don't do it. That's why you have such difficulty explaining when you get back to the office. You have to think up lies—and that's hard. You're afraid to tell me the truth—as I've told it to you.

"Salesmen, mechanics, executives, all of us, are open to the same fault. There are many, many people who know the job they turn out is not a good job, yet they let it slide. They try to throw all the responsibility on their superiors, or they make weak excuses.

### What One Gives He Gets

"If every mechanic would become a good-job mechanic, if every salesman would become a good-sale salesman, and if every one of us would give of our best we would all get the best in return, for, as you go through business and through life you will find action and reaction are equal. What you seek you find, what you give you get—and that's all there is to it."

Whereupon Tommy turned back to his mail and Roper ambled thoughtfully out to his desk and began a keen inspection of his prospect file.



*Crippled French soldiers soldering cans*

"I DON'T mind dying for my country," is the thought in many of our brave boys' minds—"but, oh, kill me rather than leave me disabled the rest of my life," they inwardly plead.

Small wonder, for they remember the cripples of old peddling pencils or shoe-strings down the street, or even worse, objects of charity and pity. They know of the thousands of men disabled in industry every year protected by a Compensation Act, perhaps, yes, but thrown out on a cold, unfeeling world to live a life of uselessness the rest of their days.

But times have changed. No need for our boys to worry, or their families to wonder who will care for them in case they come back from war with loss of arm or limb or worse.

#### No More Cripples Hereafter

Uncle Sam has stepped in. In fact, the problem is occupying a great deal of attention at the office of the Surgeon-General of the Army, supplemented by all the Red Cross can do to help. The Red Cross is paying for the publication of *Carry On*, that able magazine the Surgeon-General's Office is getting out on this very subject. It is free to those interested. "Carry On" is its message, "let there be no more cripples after this war."

To prove that this can be done, the Red Cross maintains in New York, at 311 Fourth Avenue, the Red Cross Institute for Crippled and Disabled Men, the head of which is Dr. Douglas C. McMurtrie, a pioneer of this new attitude of society's duty toward a disabled man. At the school six model courses are given to refit crippled men for their old or new trades. The six courses decided upon are: Manufacture of artificial limbs; oxyacetylene welding; mechanical drafting, printing, motion picture operating and jewelry work.

Briefly, the plan of the United States Government for the rehabilitation and vocational training of men crippled through this war is this: Even in our hospitals in France, convalescent men are shown moving pictures of successful

cripples; Thomas Edison, nearly stone deaf, for instance; Michael Downing of Minnesota with both legs, one arm and one hand gone, president of a State Bank, running his own motor car and a lucrative law practice to boot, married and raising a happy family.

But the work really begins in this country. Upon arrival in the great military hospitals under the medical branch of the army, even while still in bed, the process of refitting them to normal life and responsibilities begins. I saw wounded from overseas at Walter Reed Hospital, in Washington, being taught by reconstruction aids in occupational therapy. Some were busy with basketry or weaving, but others were doing head work. I remember one man in bed, one leg off, studying shorthand. When the men become able, they are sent from the wards to the finely equipped new buildings known as the curative workshops. Here are classes in motor mechanics, very popular, use of the left arm and hand instead of the right, classes in English and French, in shorthand and type-writing for cases of amputation of legs; telegraphy, rug weaving, artificial limb making, carpentry, agriculture and farming. Of course, the aim of these classes is to cure the men physically as soon as possible, but even here their vocational training to fit them for their future place in the community may begin.

And after the medical authorities can do no more for the crippled man, after they have done all they could to make him as near whole again, including the providing of artificial arms or limbs, even then the United States Government does not pretend to end its responsibility. Congress has created the Federal Board for Vocational Education. Theirs is the official responsibility for the re-education of soldiers and sailors of the American forces disabled by the war. A fully definite program has not yet been developed, but the Red Cross Institute for Crippled Men, already mentioned, has demonstrated how the thing can be worked out. Crippled men have been

# Carry On

## *Physical Reconstruction Makes Useful Workers of Crippled Men*

By Constance Drexel

taken off the streets, trained in one of the six trades taught there and placed in lucrative positions where their infirmities are no handicap.

As for soldiers to be refitted to civilian life, a former brakeman on a railroad has lost an arm. He can't be a brakeman any longer, but his railroad knowledge can be of use to him. He is trained to become an expert telegrapher or train dispatcher. What difference in his productive ability to a soldier fitted with one or two artificial limbs if he sits at a linotype machine all day? If he has been formerly employed at a standing job in a printing or newspaper plant that experience can be turned into good account. The point is here, that a disabled man need not necessarily be trained to an entirely new trade. His former experience should be made to count.

#### Attitude of Army Toward Crippled Men

No longer will the responsibility of army or government or industry cease by merely pensioning a man. He must, and will, be refitted to retake perhaps even a better place in the community than he had occupied before his injury. For are not brains worth more than hands or feet or even eyes? And should not a physical handicap, if properly encountered, be used to develop the brain to greater action?

Here, however, it must be pointed out, that Uncle Sam intends pensioning generously all disabled soldiers or sailors \$100 a month, or \$1,200 a year, for life in many cases. But, and this is an all-important fact, the pension will be granted regardless of a man's earning capacity that he develops in spite of his infirmity. If he does what the government and the Red Cross want him to do—refit himself to a job—he will have the pension just the same. This proves that the working man is going to be very important. We shall need all that every man can produce; the more they produce, the cheaper will living expenses become. Therefore, no idlers, no more cripples.

As the Red Cross is heart and soul back of this idea, it would seem that for his own good in industry the working man should at least become a member of the Red Cross. Anyhow, he'd be most welcome. There'll be a roll call of the nation at Christmas time, when it is hoped all will answer "Here!" The membership cost is only one dollar a year.



# A Department of BETTER MECHANICS

## No. 91

# Clutch Repairs and Adjustments on the Willys Six Model 89

By J. HOWARD PILE

**I**F the factory adjustment on the clutch has not been disturbed and the car has been driven carefully, the clutch should not need any attention the first 15,000 miles other than regular oiling and greasing and the occasional application of Neatsfoot oil to the facing to keep it soft and pliable and prevent the surface of the leather getting hard and glazed. When the clutch begins to slip, it should be relined or a new leather put on the cone.

1—Remove the two cap screws that hold the spacer shaft to the clutch cone.

2—Remove the three nuts on the engine side of the first member of the universal joint.

3—Drive the studs back so that the spacer shaft with the first member of the universal joint can be removed.

4—This spacer shaft must be slid out parallel to the direction of the slot in the clutch cone.

5—Remove the clutch brake which is on the left side-member of the sub-frame. Two bolts are taken out to remove it.

6—Remove the bolts which hold the pedals and clutch-shifter yoke, so that the shifter yoke and its shaft can be raised slightly.

7—Remove the nuts holding the three main clutch springs in place.

8—Take off the springs.

9—Withdraw the cone clutch.

10—Tear off the old facing, cutting the rivets off with a small sharp cold chisel. Try not to mar the cone with the chisel while doing this.

### The New Facing

1—If the facing is one of the stock leathers ordered from the factory, it will come with the ends cemented together and will exactly fit the cone.

2—Soak the facing in Neatsfoot oil.

3—Slip the leather over the cone, using a screw driver somewhat after the fashion of a shoehorn if the edges will not start readily.

4—Drive the facing to its proper posi-

tion with a wooden mallet or place a block of soft wood between the facing and the hammer.

5—When it is not possible to secure a stock facing and when the old facing is in such bad condition that it is not available to use as a pattern, proceed as follows:

6—Get a piece of high-grade unstretchable belting  $3/16$ -in. thick, 10 in. wide and 44 in. long. The facing is to be cut out of this.

7—Lay out the pattern on a piece of heavy paper. Fasten this paper securely to the top of the bench if there is enough room, or on a flat floor, using thumb tacks or carpet tacks. This is to prevent the paper from moving while laying out the development.

8—Draw a center line on the paper, using a straight edge.

9—Draw the arc of a circle having a

radius of  $35 \frac{9}{32}$  in. and below it the arc of a circle having a radius of  $33 \frac{9}{32}$  in.

10—The length of this arc, measured on the chord or flat is to be  $44 \frac{3}{16}$  in., but an allowance of about  $\frac{1}{4}$  in. longer should be allowed, this being cut down if necessary when the leather is tried around the cone.

11—Cut this paper pattern out with a pair of scissors and lay it down on the leather, marking the pattern on the leather with a soft pencil or crayon.

12—Cut the leather out along the lines with a sharp knife.

13—Fit the leather around the cone, stretching it as tightly as possible by hand and make a mark where the ends overlap.

14—Mark off another point 3 in. beyond this point for an overlap or joint and cut the leather off at this point.

15—The leather is now taken off the cone and the marks changed a little to make the facing fit tight on the cone. Mark each of the two points mentioned in operations 13 and 14 from  $\frac{3}{8}$  to  $\frac{1}{2}$  in. in, making the facing that much shorter.

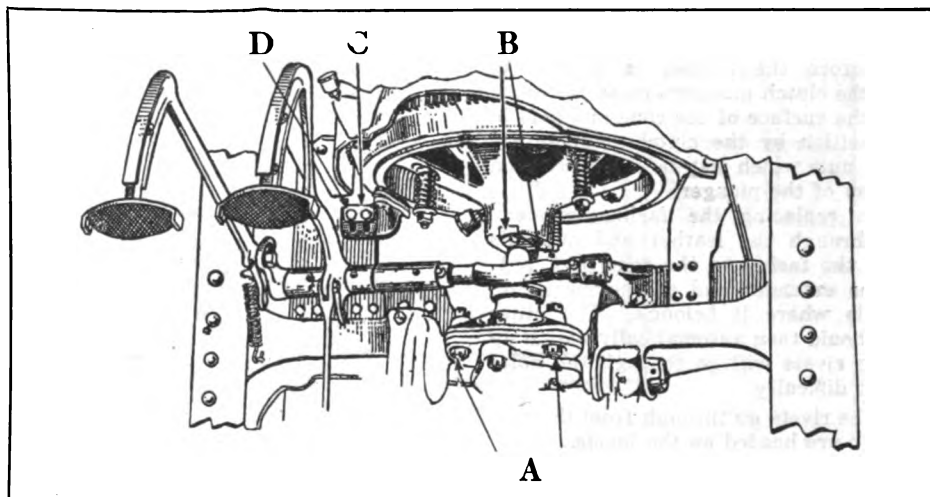
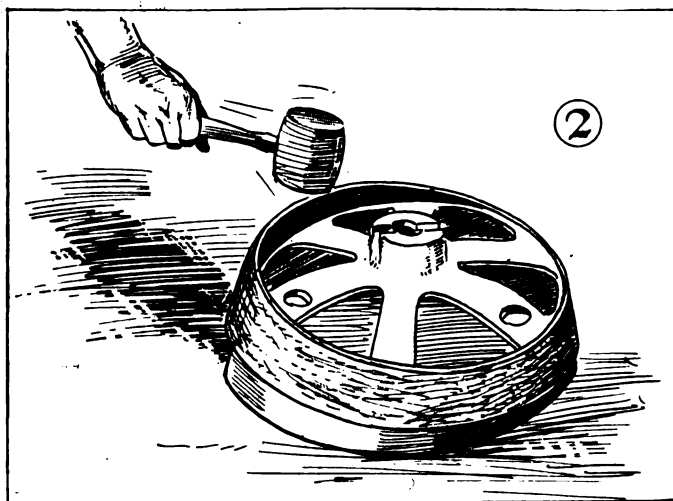
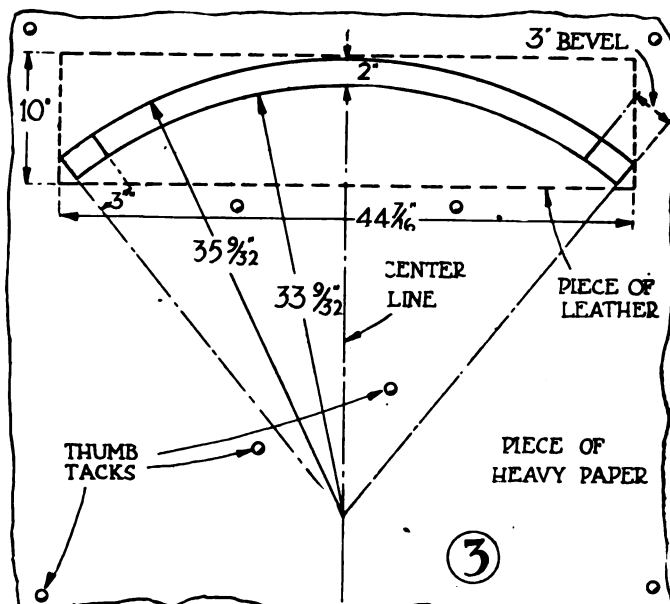


Fig. 1—Willys clutch and operating mechanism. The studs A and the screws B come out to allow the spacer shaft to be removed. C is the clutch brake, and D the adjusting screws



Above, Fig. 2—Driving on the facing with a mallet.  
Right, Fig. 3—Laying out the facing, first on paper  
then on leather



### Clutch Adjustments

16—Draw a line across the facing at the inside point and draw a similar line 8 in. in from the other end. These lines will mark the limits of the joint.

17—The rough or flesh side of the leather goes outward and the tanned or smooth side goes next the cone.

18—Bearing this in mind, bevel off the two ends using a sharp knife or a small plane.

19—Cement these ends together and allow to dry well.

20—Drive the facing on the cone with a mallet after first having soaked it in Neatsfoot oil.

### Fastening the Leather On

1—If a very small hand drill is available, it may be possible to drill the holes for the rivets from the inside of the cone. If you do not have a small enough drill, mark the leather through the holes with a sharp drill held and twirled between the fingers, then take the facing off and drill the holes.

2—The holes do not necessarily have to be countersunk as the leather is soft enough for the heads to be driven down below the surface.

3—Before the leather is riveted in place, the clutch plungers must be forced below the surface of the cone and held in this position by the clutch plunger adjusting nuts which may be screwed up on the stem of the plunger.

4—In replacing the facing, put one rivet through the leather and put this side of the facing on the cone first, putting the extended end of the rivet into the hole where it belongs. The other holes should then automatically match up and the rivets will go through the holes without difficulty.

5—The rivets go through from the outside and are headed on the inside.

6—The heads must be driven well below the surface of the leather and the ends must be securely clinched or turned over on the inside. Unless this riveting is carefully and properly done, the clutch will grab.

1—To insure smooth engagement of the clutch, the nuts of the plunger studs must be backed off until  $1/16$  in. clearance is left between the under side of the nut and the inside of the cone when the clutch is fully engaged.

2—To allow the clutch to work to its seat to make the previous adjustment, put the gear in mesh, the engine running, and let in the clutch, stalling the engine.

3—The clutch tension or force with which the cone is held into the flywheel is varied by increasing or decreasing the tension of the three clutch operating springs. Advancing or backing out of the clutch-spring studs will vary this tension. In replacing these springs and nuts in assembling the clutch parts, a bar is held in back of the clutch spider

to press the studs out. This will give sufficient room to start the nuts on the threads.

4—The clutch brake should be so placed that the clutch pedal may be pushed down one-third of the way and when held in this position, the cone will be entirely free, being caught by neither the clutch brake of the cone facing. When the pedal is half way down the cone should come in contact with the pad which will retard its motion. When the pedal is pushed down to its limit, the spring behind the brake pad should be compressed nearly solid and the action should stop the cone almost instantly. The adjustment on this clutch brake is by loosening the two bolts and moving the mechanism forward or back till the proper distance is attained.

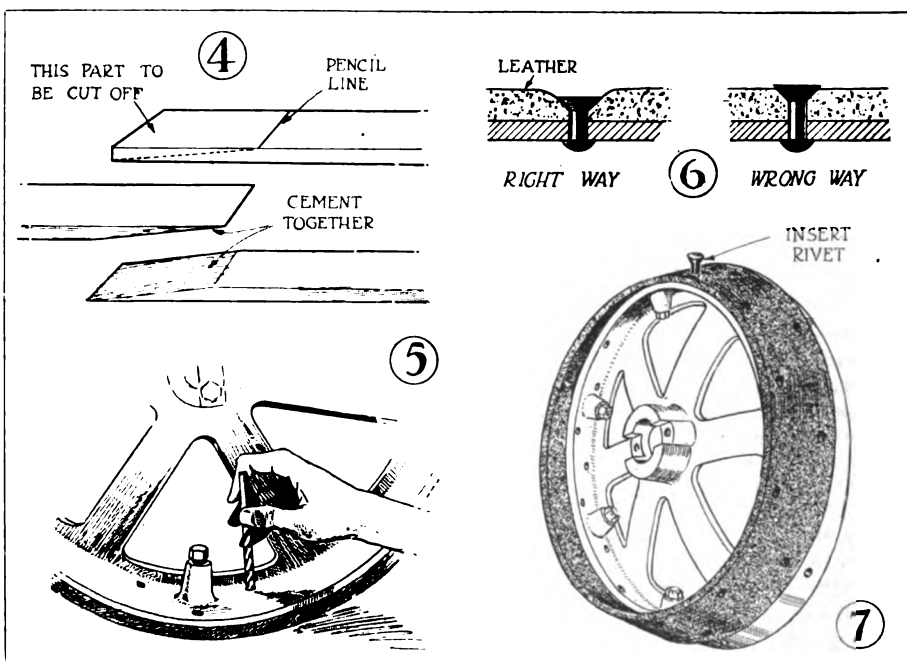


Fig. 4—Beveling the edges of the facing. Fig. 5—Marking the facing to drill holes for the rivets. Fig. 6—Right and wrong way of riveting the facing. Fig. 7—Method employed to line up the rivet holes

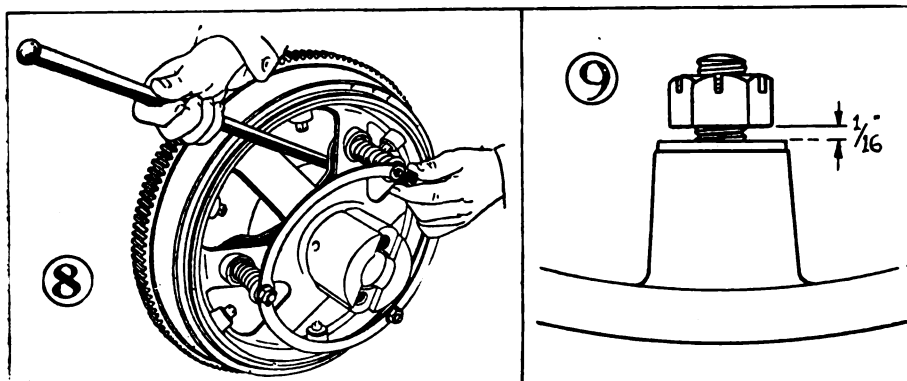


Fig. 8—Pushing the studs out so that the nuts will catch the threads.

Fig. 9—Where to measure the clearance on the plunger studs

#### Lubrication of the Clutch Parts

1—Oil and grease must be kept away from the leather or the clutch will slip. If any gets on, remove it with Fuller's earth or a rag soaked with kerosene or gasoline.

2—The clutch throw-out bearing which disengages the surfaces by pressure from the clutch shifter yoke must be kept well lubricated. There is a small plug just back of the bearing in the first member of the universal joint, and this plug is removed and grease shot in with

a gun. It is only necessary to do this once or twice a season.

3—There is an oil hole leading to the ball thrust bearing, and this hole is just inside the spokes of the cone member of the clutch. It is easily reached by inserting an oil can through the spokes and some oil should be put in at this point about every 500 miles.

4—Other points about the clutch requiring lubrication, such as the rocker shaft, connecting links, etc., are too obvious to require enumeration.

## SHOOTING TROUBLES

#### Overhauls and Adjustments on Passenger Cars

Editor Motor World: 1—How long should it take to fit a new set of connecting-rod bearings on a Baby Grand Chevrolet without taking down the engine?

2—How long should it take to grind the valves and remove the carbon from the cylinders on an Overland 83?

3—How do you adjust the carbureter on a Chevrolet 490?

4—On a 1916 Studebaker Six?

5—On an Overland 79?—Otis Taylor, Brooks Garage, Dresden, Tenn.

Reply—1—It would be a pretty difficult job to fit a new set of bearings in the connecting rods without taking down the engine, and this is not generally done. One way that the large service stations have solved the problem is to have a standard crankshaft and fit the bearings to this, then put them in the engine and correct what little differences remain. Even this entails considerable trouble taking the pistons out and putting them in again. The standard time for this sort of a job is between 6 and 7 hr. Taking the engine down would take longer, but the work could be more carefully done and there would be no come-back to the job.

2—There are two models of the Overland 83, the 83-A and the 83-B, one having block cylinders and the other having

separate cylinders. The time for the operation is about the same for both, however, the Overland service stations allowing 10 hr. for the job.

3—The Chevrolet 490 is fitted with a Zenith Model O carbureter. If the car does not attain the proper speed when running on high on the level, the mixture may be either too lean or too rich. If the former seems to be the case, see if any improvement is effected by using

a larger main jet. If too rich, a main jet of smaller size should be tried. If there appears to be a loss in the carbureter, and assuming that the carbureter is suited to the engine, the choke tube may be replaced with a larger one and the main jet increased accordingly. In cases where the engine does not pull properly on hills, it is suggested that the trouble may be remedied by larger or smaller compensating jets.

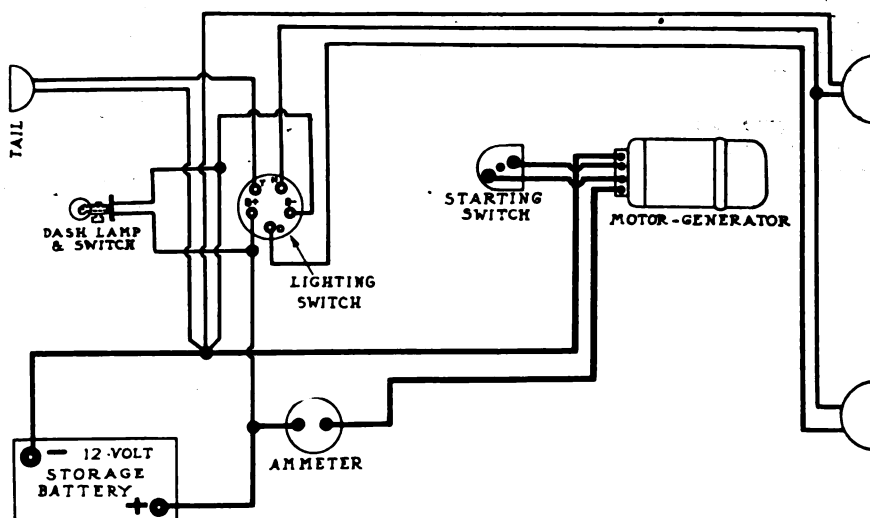
4—The 1916 Studebaker Six has a Schebler Model R carbureter. To adjust, turn the air valve cap to the right till it stops, then turn it to the left one complete turn. The first movement lifts the needle out of the nozzle and enriches the mixture, the second lowers it and makes the mixture lean. When the engine is started and has run until warm, turn the air valve cap to the left until the engine hits perfectly. Advance the spark three-quarters of the way on the quadrant, and if the engine backfires on quick acceleration, turn the adjusting screw at the bottom of the high-speed air valve up till the engine accelerates satisfactorily. Turning this adjusting screw increases or decreases the tension on the air-valve spring. When the engine is cold or the car has been standing, move the control to "gas" or "rich," thus lifting the needle out of the nozzle and giving a rich mixture for starting. As the engine warms up turn the control lever gradually back toward "air" or "lean" to obtain the best running condition.

5—The Overland 79, which was a 1914 model, was fitted with a Schebler, and practically the same adjustments apply as mentioned in the reply to No. 4.—Editor.

#### Wiring an Ammeter on the 1915 Krit

Editor Motor World: Please furnish a wiring diagram showing how we can install an ammeter on a 1915 Krit car.—Jackson Bros., Pen Argyl, Pa.

Reply—This diagram shows the installation of an ammeter as recommended by the Northeast Electric Co., who furnished the system on this car.—Editor.



Wiring on the 1915 Krit, showing where to cut in with the ammeter

### Ford Puzzles

Editor Motor World: 1—I have a 1916 Ford that runs fine at a high speed but bucks and jumps when running slow. I checked up the ignition carefully and found no shorts. The timer, coils, cable and all wiring are in good condition. It gets a good hot spark at the plugs. I tried a new carbureter but it did not do any good. Can you suggest any remedy?

2—I have another Ford, a 1914 model, which runs fine and pulls good on high gear, but when on a steep hill the engine will die if thrown into low gear. The gasoline feeds to the carbureter all right and the wiring is in perfect condition. I tried a new carbureter but there seemed to be no change for the better. What do you think is the matter?—Otis Taylor, Brooks Garage, Dresden, Tenn.

Reply—1—The trouble is that one or two of the cylinders miss on low car speed. This is a very characteristic symptom of the Ford because the car is so light that its inertia or momentum is not very great and it responds quickly when the power is taken away from one cylinder. At higher speeds the inertia would be greater and the missing would not be so noticeable, and in this particular case the cause of the missing would disappear when the car is going at a higher rate of speed. As to the cause of the missing, we can only give the reason, but owing to lack of details cannot point out the exact part responsible. From the symptoms you have given we should judge that the ignition from start to finish is sufficient for the proper firing of the cylinders at high speeds, but something is lacking when the speed is re-

duced and there is not enough current delivered to the plugs. As you have checked up your timer, cable and coils, we assume that the trouble is not here. It may very well be that the magnets have lost a good deal of their power. The magnets in a magneto may be pretty weak and yet have enough power to generate a good spark at high speed because the higher the speed the greater the current generated. You can make a rough but simple test of this by taking all the plugs out, laying them on the block so that the spark can be seen and connecting the terminals. Have someone watch the plugs one at a time while you spin the engine over at a moderate rate of speed. Do not try to turn it too fast, as this will defeat the purpose of the test. Another indication of weak magnets would be hard starting on magneto. If these tests show that the magneto is all right, then your trouble may be looked for in any of the following places:

Magneto Contact—Remove the three small screws that hold it to the case and clean off the under side with kerosene, picking out any bits of transmission lining that may have lodged there.

Oil Reservoir—Drain out and examine the sediment carefully. If small bits of metal and tiny wires are present, this would indicate either that rapid wear is taking place in the engine or transmission or that transmission lining with wire insertion has been used, and the ground up metal from any of these causes is liable to short circuit some of the coils of the magneto. The remedy would be to wash out the case thoroughly and remedy the cause.

Vibrator Adjustment—Check this up to see that it is O.K.

Compression—Leaky valves in one or two cylinders might cause missing at low speeds because at high speeds there would not be time for the gas to get through the leak and the cylinder would fire all right, but at low speeds leakage would result in missing. A scored cylinder or leaky rings would produce the same effect. You can try the compression roughly by pulling the crank up slowly for each cylinder in succession, noting how they compare. If the compression is good, you should be able to give the crank at least two or three rocks up before you go over dead center.

Please try these points out and let us know whether you find the trouble. If not, send the results of your tests and we may be able to make further eliminations and so locate the trouble.

2—Your trouble here is most likely not in the engine at all if it pulls well on high gear at both high and low speeds, as you suggest. We would look for trouble in the clutch. The fingers of the clutch are likely out of adjustment so that when the low gear is thrown in the high gear still stays partly or wholly engaged. In other words, there is no neutral. An evidence of this would be that the car kept on moving forward when the clutch pedal was pushed to neutral, although this motion could be stopped with the brake. If this does not remedy the difficulty see that the connecting link between the low gear and the clutch is O.K. If it is bent or broken this may be the answer.—Editor.

### The Owen Automatic Farm Light and Power Plant

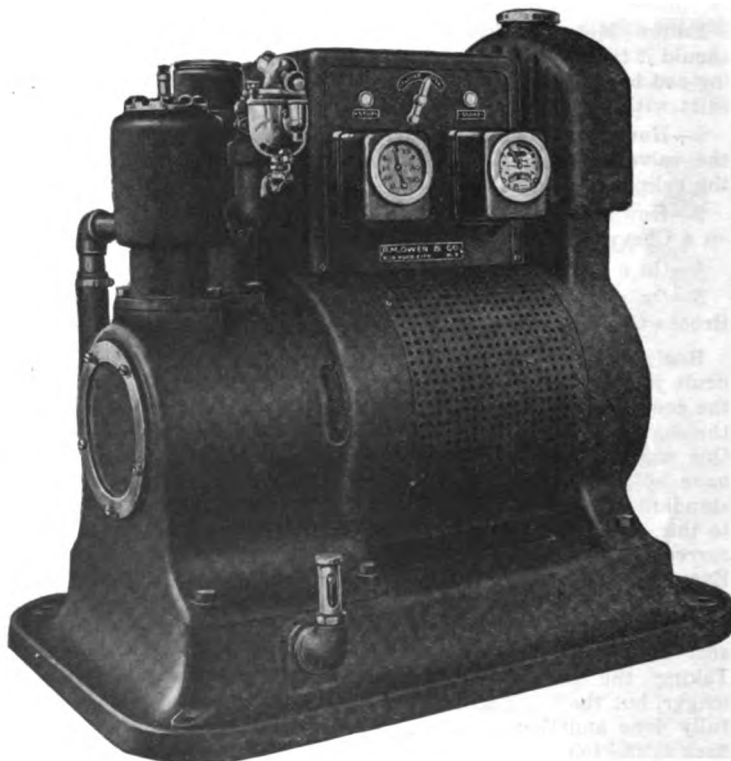
R. M. Owen & Co., New York City, are manufacturing a farm light and power plant with automatic features. The complete outfit consists of a single-cylinder gasoline engine direct connected to a four-pole generator; a 32-volt, 80-ampere-hour battery and a switchboard which carries the automatic features.

The engine starts automatically when the battery reaches a degree of discharge that would necessitate recharging, and it stops of its own accord when the charge is complete. If the battery is under a heavy load, but is charged pretty well, the engine starts itself to make up the current loss from the battery.

The engine uses a rotary valve of novel design. The valve itself is a section of a cone and is held into a seat of corresponding shape by a coil spring. If the valve should stick for any reason, it would rise from the seat because between the driving shaft and the valve is a coarse thread which is the driving means to the valve, and as soon as the friction of the valve overcomes the spring action the valve turns on the thread, causing it to rise and free itself. Lubrication of the valve is through a small hole.

The flywheel is fan-shaped and draws air in through slits near the generator, passing this air through the fields and armature and then through the radiator, which is of cast iron with a double construction.

When the battery is fully charged the outfit has sufficient capacity to supply current to 100 20-watt lamps for 8 hr. The floor space covered by the generating unit is 22½ x 32½ in. Oil is carried in the base, a sight indicator showing the level, and the fuel is in a separate tank. All the automatic devices are mounted on the switchboard.



*The Owen automatic farm light plant which is fitted with automatic features that almost eliminate the necessity of watching it*

# THE LAW

By George F. Kaiser

As It Applies to  
Dealers  
Repairmen  
Garagemen

## Present Claim on Promissory Notes

Editor Motor World: Under date of July 11 we sold an automobile valued at \$1077.38 on a conditional sales contract. The party paid us \$500 down and the balance of \$577.38 was to be paid in eight equal payments, monthly.

In the course of events the owner of this car and his son both died of influenza and the car at the present time is in the hands of the estate. The wife of the deceased was made executrix of the will.

There was a note due us on Oct. 24 and one on Nov. 23, 1918, which at this writing are unpaid. When this car was delivered on July 26, 1918, we had a contract sworn to before a notary public, but same was not registered with the county clerk as a chattel mortgage.

What we wish to know is this: Can this chattel mortgage still be registered or would same be illegal on account of the death of the owner of this car? Can we confiscate this car? If not, what should be the legal proceedings in this case?—The Service Garage, Inc., Passaic, N. J.

Answer—I believe the simplest way out of your difficulty is to forget all about your acts under the chattel mortgage and present your claim on the promissory notes you hold to the executrix, as your debtor left property which will have to be administered.

Do this through an attorney who is familiar with the technical requirements of the law, so that you will be properly protected and so that your claim is presented in proper form and within the proper time.

## N. A. D. A. Interested in Lien Laws

The N. A. D. A. is about to take up the matter of having lien laws introduced in the states where no legislation of that kind has been enacted up to this time.

No more valuable work could be performed by an association and it is to be hoped that its efforts meet with success. The question of what law to use as a model naturally becomes an interesting one. To date no law which has been enacted could be called ideal. No matter what form of law is used, however, there are certain provisions which should appear if it is to be of any real value to dealers generally.

A lien law should provide for a lien for repairs as well as for storage. It

## The Purpose

of this department is to help our readers smooth out the legal kinks that now and then cause them confusion in their business. What legal knots are you trying to untangle? Mail them to us. We will be glad to help you. In sending queries be sure to include copies of contracts and notes to which you refer.—EDITOR.

should provide that a lien be given for the furnishing of accessories and supplies and gasoline and oil. It should give the right of lien to garagemen, repairmen and dealers generally. It should provide that the car can be recovered by the dealer in some simple way if it is taken out of his possession. It should make the right of lien prior to the right of persons having claims under chattel mortgages and conditional sales, and it should include a provision that the holder of the lien shall have the right to sell the property and satisfy his claim out of the proceeds.

## Cars Defective and Maker Refuses Their Return

Editor Motor World: At the opening of this season we signed a contract with the ——— Carriage & Motor Co. for 150 cars. We received the first shipment and all cars were disposed of. Within the week we had all of them in the repair-shop, due to defective parts and poor workmanship. The next shipment arrived. These were much harder to dispose of, as the first cars sold gave the car a black eye. These cars as well as two later shipments proved to be as bad as the first. Seeing that it would be only a losing game to handle this car, we decided to accept no further deliveries and notified the factory to that effect.

Eleven cars were shipped into Wheeling, which we refused to accept, and the railroad company placed them in storage. Some time later the ——— company sent one of its officers here and disposed of the cars at a sacrifice and we received a bill amounting to the sum that the factory lost on the deal plus this officer's expense to and from Wheeling. We wrote the factory objecting to the bill, but could get no satisfaction.

In order to force us to pay this account they have applied our deposit at the factory on it and are shipping our repair parts C. O. D., without allowing any discount and in many cases in excess of the retail price. Each time they acknowledge the discrepancy, but instead of making it good with cash, or applying it on orders, they apply it to this account, which we do not think is just. They also apply to this account our credit memos for sales made by our sub-dealers.

Cars were shipped to us C.O.D., sight draft attached to bill of lading. Is there any redress for us? The account amounts to nearly seven hundred dollars.—F. M. Sheets Motor Co., Wheeling, W. Va.

Answer.—If matters are as you state them to be I should think you have redress.

There is only one way to handle this matter, however, as it is unlikely that the company will admit its cars were defective. Put your contract, all correspondence with the company, and all the other writings you have concerning the matter in the hands of some good local attorney, and after he has carefully examined all the facts, follow the advice he gives you.

It may be necessary to institute suit, which, of course, Motor World cannot do for you.

The result depends to a great extent on the wording of your contract, which should have been examined by your attorney before you signed it.

## Claim Repairman's Lien

Editor Motor World: Will you please tell us what we can do in the following case: About three weeks ago a car was brought in to us to be repaired and we put a new spring on it, in addition to doing some other work. Now the party that owns the car won't pay, claiming that the man who brought it to us had no authority to order a new spring but only to have the old one repaired. If we can induce the party to bring the car in again can we take off the new spring for which we have not been paid?—A. J. S., Buffalo, N. Y.

Answer.—If the car is voluntarily brought to you again, why not refuse to give it up and claim your lien as a repairman? The chances are your bill will be paid in a hurry. Of course you cannot trick the owner into bringing the car to you again and have any claim of lien at all.



# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1627—COUNTERBORING JIG FOR CLUTCH

A jig to be used in counterboring the new leather facing on a cone clutch is a great time saver. The tool shown consists simply of a hinge joint which has a hardened steel bushing to act as a guide for the counterboring drill and an adjustable stop screw to limit the movement of this drill. After the clutch facing has been cut to fit and has been temporarily secured in place the rivet holes are bored. Then the stop screw of the jig is adjusted so that when the tool is put in place in each of these holes the drill will not cut in more than the desired amount.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1628—LATHE MILLING ATTACHMENT

This is an attachment for a lathe for the purpose of cutting keyways on shafts or other simple milling jobs. The compound rest is removed and clamped to an angle iron in such a way that it has up-and-down motion instead of forwards-and-backwards motion as when in the regular position. A V-block with clamp is bolted to the compound rest and the milling cutter is held in the headstock or in a chuck. The work is positioned by means of the compound rest handle and the wheel.—George Grillier, French Machine Shop, Red Bank, N. J.

## No. 1629—BENCH LAMP BRACKET

A lamp bracket mounted on a corner of the bench will be found of great service in holding a lamp firmly while a stuck door is pried open or other necessary work is done on it. A lamp is an awkward article to handle in a vise, particularly without marring the paint; this bracket practically takes the place of a vise, being much more efficient at the same time.—H. W. Perkins, Oldsmobile Co. of New England, Boston, Mass.

## No. 1630—PISTON RING RACK

When overhauling pistons and rings the safest place for the rings is on a rack. The rack shown consists of a strip of iron about 3/16 x 1 1/4 in. and is bolted to the back board of the bench. There is a peg for the rings from each cylinder. Thus in removing the rings there is no difficulty in returning the right rings to the right cylinder, and by preserving the order in which the rings are removed from the piston it is an easy matter to put each ring back in the very groove it was removed from.—L. Russel, Cadillac Auto Co., Boston, Mass.

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

*1—Describe the shortcut briefly but clearly, in few words.*

*2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.*

*3—Write on ONE side of the paper only.*

*4—Sign your name and initials, the name of the company you are with, and the town.*

*Write plainly. If your name is unusual, print it in capital letters.*

## No. 1631—BLIND BUSHING PULLER

This puller is designed for pulling a worn bushing out of a blind hole, i.e., a hole closed at one end. The usual method in such a case is to drill the bushing out, or, if there is not room for this operation, it may be necessary to chip it out with cold chisel and hammer. But with the puller shown the bushing may be removed with the same facility that a nut is unscrewed from a bolt. The tap should be of a size to fit the hole in the bushing. A block or nut is inserted under the tap, and the pulling of the bushing consists in merely screwing the tap into it until the bushing comes out. On the face of it this is one operation, but what actually happens is that first the tap threads its way into the bushing until the tap reaches the block, when further turning forces the bushing back out.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1632—SPARK PLUG CASE

Spark plugs are easily damaged or lost and a wooden case in which eight may be stored has proved to be well worth while. The case has eight recesses, one for each plug, and opens out like a book,

splitting each spark plug compartment in half. Two strips of wood of sufficient length, breadth and thickness to form the body of the case are clamped together and then the recesses for the spark plugs are bored. The main part of the recess calls for a bit 1 1/2 in. in diameter, while this is countersunk with a 3/4-in. bit to fit the porcelain. Cap strips are then added top and bottom, hinges and a catch are applied and a card holder is attached to the side of the case, in which the name of the owner or any other information may be recorded.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1633—AXLE WASHER CUTTER

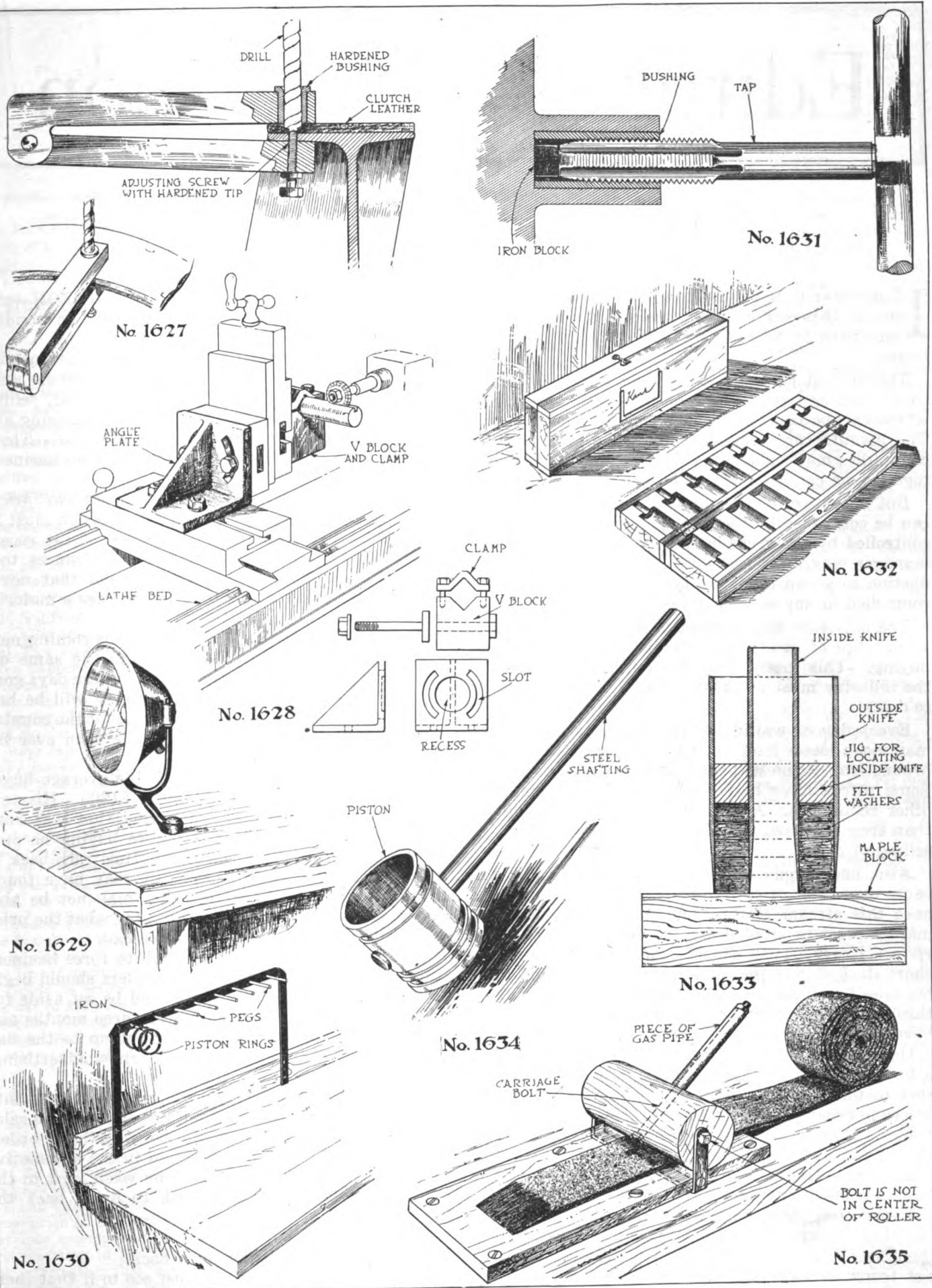
Heavy felt washers, such as are used for keeping the grease from flowing out of the ends of a rear axle, are cut by means of dies made for the purpose. The dies are made from tubing and the cutting edges are hardened and ground. The method of procedure is first to cut the washer out, using the outside die. Then the doughnut-shaped jig is placed inside to locate the die which cuts the hole for the axle shaft. Then this die is inserted and the hole cut. Several washers may be cut in succession without removing them. The cutting is done on a hardwood block.—L. Russel, Cadillac Auto Co., Boston, Mass.

## No. 1634—PISTON MAKES A BABBITT LADLE

An old piston is readily converted into a ladle for holding babbitt by putting a piece of steel shafting through the wrist pin holes to form a handle. The joint at these holes should be very tight either by having the shafting a press fit or by welding around the joint. A piston that has the bosses pretty well down is best, as it will be less likely to topple over if too much metal is put into it.—Elmer Balmos, Devine, Tex.

## No. 1635—QUICK BELT CLAMP

A clamp for holding belting firmly while shaving down the end for splicing is made from a wooden roller mounted eccentrically in a bracket on a base. A handle formed from a piece of gas pipe is passed through the roller and fixed there. The height of the pivot of the roller is such that there is just sufficient clearance for the thickness of the belt when the handle is in its raised position. On depressing it the belt is gripped firmly between the roller and the base, simplifying the operation of beveling the end of the belt.



# Editorial Observation

## The Problem Is Sales

**I**T is better to have unfillable orders than unsalable stock. It is better to have customers clamoring for cars than to have cars depreciating in the warehouse.

The present problem of the industry is two-fold—production and sales—but the production end is one which can be controlled more easily than can sales. The manufacturer can pay wages to employees, he can gather materials, and as fast as he can get things together he can get into production.

But the return of the market is not something that can be controlled by the manager of a factory. It is controlled by the great buying public. A production manager may, by the order of a moment, cause production to go up or down, but the buying cannot be controlled in any such easy manner.

The only safe way is to push buying UP and have a shortage of goods in preference to a shortage of buying. This means that the entire selling end of the industry must get busy NOW. There is no time to delay.

Every day of waiting in the sales end of the plan may mean losses later on. Factories are returning to production. Some will come back faster than others. Some prices have been reduced and there may be other reductions. Also, many prices may go higher than they are now. All these things do not help the selling of cars.

Also, once production assumes proportions it will cause quantities of cars to be shipped to dealers, and once this stream starts it must go somewhere. A market must be created for the stream before it arrives. Every dealer should plan to operate with a short stock during the coming year. He should force his sales by all possible LEGITIMATE methods from this day on in order that he may not find himself burdened with an accumulated stock.

Once a stock begins to pile up on a dealer he is in a bad way. He is likely to become panicky and resort to undesirable methods. He is inclined to cut prices in order to get from under. He may make long trades. He may do a lot of things that turn the year into one of short or no profit, whereas there is every reason why the coming year should be one of the best in a long, long time.

Everything points to good business, and the training that dealers have had in war-times has taught them how to keep money after they have made it and not throw it away in wild service schemes and in spineless used car transactions. If the dealers only

keep their heads and produce some ACTION—and produce it NOW—the coming year should be wonderfully prosperous.

But it means that the sales program must be forced. No dealer should decide not to advertise until after selling has returned. If he does that, selling may not return at all—for him. The advertising and sales push must go ahead of sales this year. There must be no waiting for the return of spring business. Sales must be forced this winter.

Buyers have had the impression that car prices would tumble to low levels. This impression must be combated. The public must be told that the recent price cuts were only the removal of advances that had been made to carry over a period that never materialized, and that great reductions are a material impossibility.

And don't forget this: That spring is coming next year with the same old sunshine and the same old beckoning highways, just the same as in the days gone by, with the exception that next spring will be hallowed with the joy of peace and the call of the country will be stronger and more irresistible than ever before.

When that day comes what will the average buyer care whether his car costs \$1100 or \$1200. His only desire will be for a CAR—anything that will run! And if he waits until spring before buying he may be only a railbird in the big springtime race back to nature and the joys of peace. He may have found the \$100 reduction he sought, but may not be able to buy a car. And what does it matter what the price of a car is if there are no cars to be had.

The shows are going to do much to force business back again, but in the meantime dealers should begin to advertise. Appropriations should be set aside for advertising during the next two or three months and campaigns should be conducted right up to the day of the show. Then should come the show advertising, and the after-show advertising.

Sales departments should whip prospect lists into shape and begin active work. Salesmanship and sales management at shows should be of a high order. From this day forward every man in the automotive industry, from factory head to the wash rack in the garage, should push, push, push to bring back the buyers.

We must have buyers.

The dealers must bring them back.

And for the next year we must see to it that there are more buyers than cars.

## Letters from Readers

*THIS page is for the use of MOTOR WORLD readers with something to say. Letters on subjects of interest to dealers, garagemen, repairmen and jobbers are always welcome.—EDITOR.*

### How Will the Tax on Cars Apply?

Editor Motor World: Referring to an article in Motor World of Nov. 13, entitled "Have Contract Buyers Pay the Tax," would ask that you kindly advise if the proposed tax will apply to the sale on contract or lease on used cars.

We have been unable to obtain any positive information on this matter through the Federal office here, and would ask that you use your best efforts to obtain for us definite advice regarding this important subject.

It seems to us that this would be a letter which would interest your readers.  
—A. A. Peterson Co.

It is difficult for one to state definitely just what the interpretation of the Federal Tax Law will be, because it very often happens that the tax collectors in different districts do not themselves agree on this subject. However, our understanding of the arrangement is that the tax applies to a conditional sale or lease sale of any kind in which property passes from the possession of a dealer to a buyer.

Therefore our suggestion is that in all contracts of any kind you insert a clause to the effect that taxes, if any, shall be paid by the buyer or lessee of the car, and then I would take this matter up and get as early an opinion as possible from the Federal office in your district.

In case there is doubt as to whether the tax should be paid, I believe it would be a wise move to require the buyer to put up a deposit to cover the tax in case it should be collected, because if he got the car in his possession you might have difficulty getting the tax from him, even though the contract provided that he should pay it.—EDITOR.

### Rural Motor Express Idea

Editor Motor World: In reading your issue of Nov. 13, I was greatly interested in the article covering a report made by Mr. S. A. Mailes on the "Rural Motor Express Idea."

I had had in mind for some time a proposition of this sort and would like to get into communication with men who are operating in this line, that I might get information that would be of great assistance to me. If you can give me the addresses of different parties who you

think would be able to give me this information I would greatly appreciate it.  
—James B. Burdell, Novato, Cal.

Full information on the subject of the Rural Motor Express may be had by writing to F. W. Fenn, secretary National Motor Truck Committee, 7 East Forty-second Street, New York City.—EDITOR.

### An Appreciation

Editor Motor World: We wish to take this opportunity of thanking you for the assistance and co-operation you have given us in making the Motor Transportation Conference a tremendous success. It is deeply appreciated.—Colt-Stratton Co., Keith Morgan, Advertising Manager.

### Committee on Public Information Quits

Editor Motor World: The Committee on Public Information, having ceased its "domestic activities," no longer releases special articles to house organs, trade journals, etc., and the division that handled this matter has been abolished. Consequently, there is now no one in office here to receive copies of these publications, and it will be a saving of your time and material to drop the committee from your mailing list.

In sending out this notice, those of us who still remain wish to thank you on behalf of the committee for the loyal co-operation which you have given us, and for the patience with which you have assisted the government's publicity program under very trying circumstances.—Harvey O'Higgins, Acting Chairman.

### Tri-City Automobile Trade Association

Editor Motor World: At the last meeting of the Tri-City Automobile Trade Association it was decided to have a board of governors consisting of the executive committee and the chairmen of the standing committees. This board met and discussed various matters in connection with the strengthening of the association and the necessity of each member attending the meetings. The points that were touched upon were: (a) Uniform service regulations, elimination of free road and street service in compliance with Government request; (b)

closing hours evenings, Sundays and holidays. The board of governors is to pass on all grievances. Anonymous complaints will not be considered.

TRADE LOYAL is an expression recently coined and used with reference to the automobile dealer. You are not TRADE LOYAL if you stand by and listen to anyone, whether a customer of yours or not, while he slanders and libels another member of the trade. You should resent his remarks as vigorously as if they were made about you, because this "bird" will go to the next fellow and hand you the same package.

Don't be too critical of the other fellow's methods and deals, keep close watch upon your own actions. Start the good work by putting your own house in order; then, and only then, can you make suggestions to your neighbor.

The Senate Finance Committee after changing the proposed tax of 10 per cent on automobiles, trucks, parts and accessories to 5 per cent, has announced a substantial reduction in the proposed resale excise tax on motor cars and trucks. They now read as follows, the fee being for Federal license to be paid by the owner of the car:

#### Automobiles and Motor Trucks—

Up to 23 hp.....	\$5
23 hp. and not over 30 hp.....	10
30 hp. and not over 40 hp.....	20
Over 40 hp.....	25
Motorcycles .....	5
Electric Vehicles, per horsepower... 2	
(Instead of \$5), plus 25 cents for each hundred pounds of weight (instead of 50 cents, as in the House measure).	

Taxicabs, seating 2 to 7 persons....	10
Motor Conveyances in Public Service, carrying over 7 persons.....	20

The question of the tax on gasoline is still under consideration.—Tri-City Auto Trade Association, Victor G. Kropf, Commissioner.

### Wants System for Selling Used Cars

Editor Motor World: We are going to impose upon your good nature for a minute by asking for some information, and hope that we will be in position to return the compliment some time. We want to work out some kind of a plan by co-operating together to buy, sell and properly handle "used cars." We feel sure that many systems have been worked out that are successful, and we would like to get a line on how the system is arranged and worked, and would like to have you give us the names and addresses of any such that you may know of. The plan that has been talked here is to have one central place for used cars, where all cars of this sort will be placed and appraised.—Snohomish County Automobile Chamber of Commerce, Everett, Wash.

Numerous plans have been tried for handling used cars on a co-operative basis. We do not recall, however, any central-market system that has worked

out with satisfaction, although they have been tried in quite a number of instances. We imagine the principal difficulty is that each dealer desires to conduct his own business in the way he sees best and likes to keep it confined under his own roof. For that reason he isn't at all keen about going into any co-operative plan which makes it necessary for him to put his merchandise in any central warehouse or salesroom and depend upon the efforts of a separate organization, other than his own, to sell his goods.

The most successful plan we know of is one which was operated in Grand Rapids, and so far as we know is still in operation. It also has been tried in Toledo, Ohio, and, we believe, it is working there.

According to this plan the office of the dealers' association has an appraiser who is able to look a car over, find out

what work must be done on it, and then give the price at which it must be taken in in order to permit the dealer to fix it up and resell it at a profit. Whenever a prospective buyer appears anywhere on the roll, he is advised to take his car to this appraiser and get a trade in valuation on it. After this valuation is fixed, it is put on a certificate and the certificate is given to the prospective buyer, good for ten days. Thereafter the buyer takes his car and this certificate along the row, and the dealers know that that is about what the car is worth.

In case any dealer desires to go over that amount it is his own funeral, and if he doesn't see fit to allow as much as the certificate says, that also is his own affair; but, as a rule, we understand the dealers stick very close to the figure. As a general rule, a dealer can offer more for one of his own cars in trade than can any other dealer in town, and

that is usually understood wherever any arrangements is in effect.

The prospective buyer has to pay a fee of, I think, \$1 for having his car appraised; and my recollection is that when his car is taken in trade by any dealer, the dealer refunds him this money. This permits every dealer to keep his own business under his own roof, and the appraisal arrangement merely serves to put a fixed valuation on used cars and prevents buyers from shopping along the row, and beating the dealers down, and telling to one dealer things that another dealer is alleged to have said.

The arrangement worked very well indeed in Grand Rapids, and we understand it is also working well in Toledo. If you put any arrangement into effect, Motor World would be very glad to learn at any time in the future how it worked out.—EDITOR.

*Here's*

# What Your Government Thinks

## *Of Costs and Accounting—And of You*

### *To Retail Merchants:*

THE revenue act now pending in Congress is expected to produce \$8,000,000,000. This means a tax on the average of more than \$76 for every man, woman and child in America. The average per family is nearly \$340.

In many businesses taxes will be one of the largest items of expense. It is of the utmost importance, therefore, that every concern in business, large or small, whether corporation, partnership or individual, shall maintain an exact record of its receipts and expenses—in other words, keep accurate accounts. Taxes should be considered as an expense of the year for which they are assessed rather than for the year in which they are actually paid and the necessary reserves should be provided for at once.

### *Close Check to Be Kept*

Because of the large amounts to be collected the Bureau of Internal Revenue will be compelled to check the income tax returns filed by taxpayers more closely than heretofore. The retail merchant who is able to place before the internal revenue inspector book records showing exactly how he arrived at his statement of net income will greatly facilitate the Government's task of collecting the war revenues and save himself annoyance and expense.

No special system of accounts is prescribed by the Internal Revenue Bureau, but the books should show in detail inventories, purchases, sales, capital investments, depreciation and similar items required in making up the income tax

return. Every merchant should study the income tax law and regulations and see to it that his accounts are kept in a manner that will enable him to determine his net income for taxation purposes.

### *Keeping Systematic Accounts*

Aside from the necessity of keeping systematic accounts in order to comply with the Government's requirements, every progressive merchant should adopt an approved accounting system for the good of his own business. In no other way can he further his financial interests more effectively. It has been proven time and time again that accurate accounts are absolutely essential to success in business. The merchant who has a good accounting system is able to eliminate waste and unnecessary expense and can so control his purchases and his credits as to greatly lessen the chance of failure. The inventory, which cannot be taken without some form of accounts, is the compass of a business. Without it the direction in which the business is heading either for success or failure cannot be determined.

In the complexities of modern business costs must be calculated with certainty in order to determine what the selling price of an article should be in order to yield a reasonable profit. This is impossible without books of account.

The profits of a business or the losses of a business cannot be determined without book record; and now that the nation requires every citizen to contribute to the war budget within his means and income, the returns required by the Gov-

ernment under the revenue laws cannot be made with any degree of accuracy without books of account and annual inventories.

The bad-debt loss of the nation, which runs into large figures annually, is due in large measure to inexperience and inability. If merchants would keep even the simplest books of account the bad-debt wastage would be reduced materially, for inability and inexperience are usually marked by the absence of an accounting system.

### *Business Frugality Urged*

Owing to the withdrawal of man power from industry it is essential that every business man be more frugal and exert himself more effectively to conduct his business efficiently. Extra effort put forth in carrying on the business so as to increase volume at less expense will decrease the chance of failure, increase the earnings of the merchant as a reward for his effort, and enable him to share more liberally in the governmental financial program made necessary for the successful prosecution of the war.

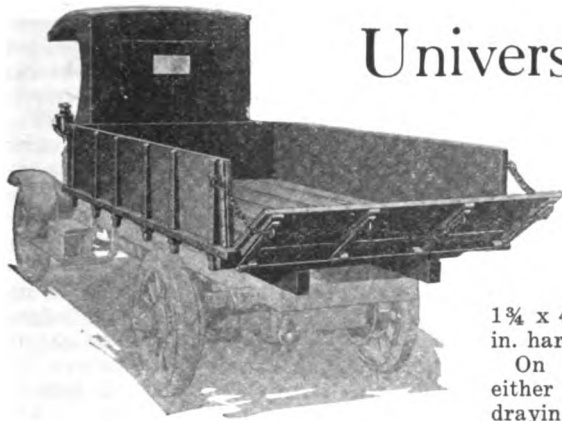
The man who knows the exact condition of his business from day to day has an immeasurable advantage over the individual who has no records upon which to base his operations. It is the duty of every citizen, especially in these times, to keep in such close touch with his business through record keeping and otherwise as to maintain the greatest efficiency and render to his Government every cent due in taxes.

DANIEL C. ROPER,  
Commissioner of Internal Revenue.



# Universal Multi-Service Truck Bodies

*A Single Platform Takes Stake, Grain or Rack Sides—Dealer Saves Shipping and Storage Charges*



1 3/4 x 4 1/2-in. cross sills and two 2 3/4 x 5-in. hardwood sub sills.

On this platform may be mounted either a set of 36-in. stakes for city draying, 20-in. grain-tight express sides and end gate or a set of 48-in. racks for hauling livestock. These sides are easily interchangeable as the need requires.

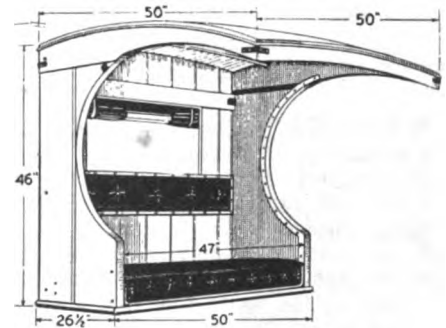
A special feature of the stock racks is the end-gate construction. The end gate has a sliding door which when opened gives an entrance space of 25 in. wide and 45 in. high, which is large enough for hogs or medium sized stock. If the owner desires to haul larger stock, the end gate can be removed in a few minutes.

Due to the knock-down construction of these bodies, warehouse space is saved, as the dealer need only stock a few platforms and carry as accessories a set of stock racks, panels and stakes. It is then a simple matter to mount the kind of body on the chassis that will best suit the customer's needs. The platforms are not crated, the express sides, stock racks and stakes being crated in separate packages.

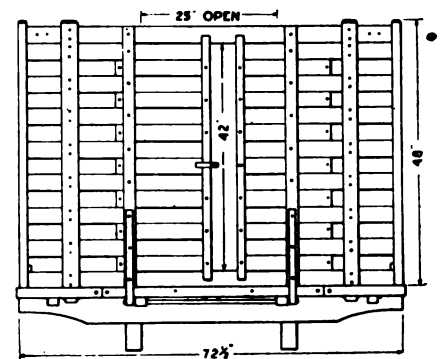
The Parry universal cab is built entirely separate from the body and is shipped knocked down and crated. The frame is hardwood and brackets are provided for mounting the cab to the truck seat. A soft cushion is furnished with the cab.

**A** UNIVERSAL truck body that requires but one platform for stake, rack or grain sides is made by the Parry Mfg. Co., Indianapolis, for trucks with capacities of 1, 1 1/2, 2 and 2 1/2 tons. The bodies will fit any chassis whose frame length does not exceed 130 in. back of the driver's seat, and there is no particular difficulty about mounting the body on the chassis. A feature of the bodies is the adjustable sill which can be quickly and rigidly set to fit different chassis-frame widths from 28 to 43 in. outside to outside.

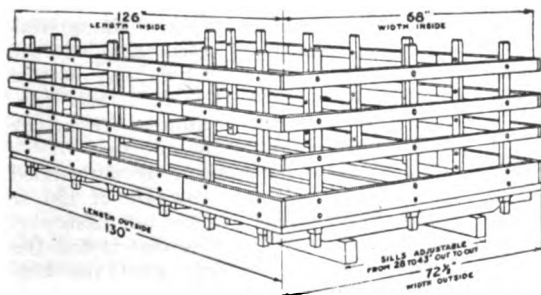
The platform which is used with any of the different style sides is 130 x 72 1/2 in. outside measurement, and the floor is of 1 1/4-in. seasoned long-leaf pine, ship lapped to make it grain tight. There are five heavy steel strips lengthwise and strips at each end. The stake brackets are set flush on the outside to minimize the danger of knocking them off, and the entire construction inclines to the use of bolts rather than nails or screws. The outer edge of the platform is steel banded and the platform is supported by six



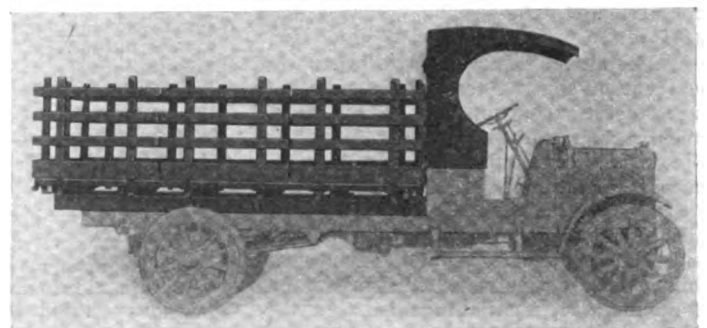
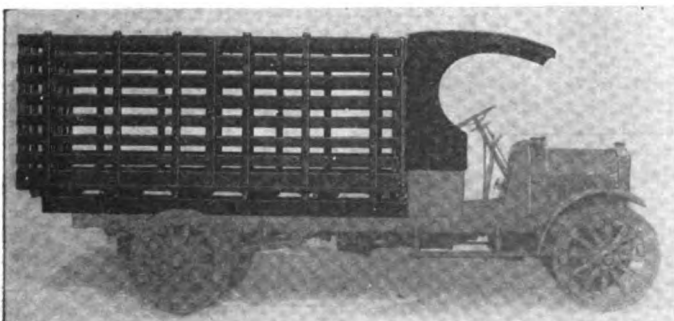
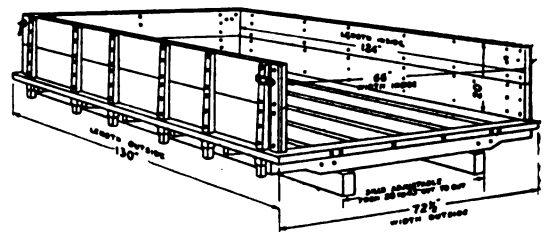
*The Parry cab*



*End gate of the stock rack*



*The drawings on either side show the dimensions and principal features*



*Parry stock bodies and cabs, the parts supplied as stock being shown heavy and the truck parts lightened*

# Tractor Expected to Increase Crop Acreage

*However, No Material Reduction in Cost of Farm Operation Is Anticipated, According to Department of Agriculture Report—Advantages and Disadvantages Cited*

WASHINGTON, Dec. 5—"Judging by the experience of tractor users, it is not safe to expect any material reduction in the cost of farm operations per acre through the use of the tractor, but it is safe to expect to be able to increase the crop acreage to a very considerable extent and at the same time the amount of crops which one man can raise." This is the summary of tractor experience in New York State stated in a bulletin issued by the U. S. Department of Agriculture following investigations. Tractors using gasoline or kerosene, says the bulletin, are increasing in numbers on Eastern farms. More than 250 New York State farmers provided the detailed reports of their experiences with tractors during 1917 and the spring of 1918 as the basis for the bulletin, which points out both the advantages and disadvantages of the tractor, the farm conditions, economy of the tractor and shows that not every farmer will find the tractor profitable.

The surface of New York State, according to the bulletin, is rolling. The soil is a comparatively heavy loam with heavy clay sub-soil and numerous large and small stones. Some of the larger stones can cause a breakage of the plow or hitch. The farms are diversified, many of them growing at least half a dozen different field crops. Most of the farms, it was found, grow hay, oats, wheat, corn, barley and beans, with the largest acreage devoted to the first names and decreasing respectively. A small percentage of tractors were found used on farms where more than 40 per cent of the crop acreage was devoted to fruit.

## Advantages and Disadvantages

Tractor owners were asked to state the advantages and disadvantages of tractors and the replies show that tractors:

Work more rapidly—More than 50 per cent of the owners pointed out that the tractor performs its work more quickly than horses and that even the 2-plow tractor results in a considerable increase in the plowing rate.

Saves man labor.

Does better work—More than 50 per cent of the farmers replied placing the ability to do better work third in the list of advantages, mentioning also that the best work was evident and emphasized under hot weather conditions.

Inability to use the tractor satisfactorily until top soil is well dried out was the first disadvantage named.

## Packing Injurious

Packs moist soil—It was found that on the comparatively heavy soil packing was injurious in those spots and there was likelihood of the tractor miring in such places.

Inefficient operators—The difficulty of securing efficient tractor operators was named.

Breakdowns—This was mentioned, but is often due to inefficient operation.

Unsatisfactory on rough land.

Unsuitable for small fields.

Lack of power was mentioned by a few, but it is said this is usually the re-

sult of error in choosing a machine too small for the work required of it.

Discussing the size of the farm and the tractor the bulletin points out that a farm business must be of sufficient size to justify the tractor. Eighty-four per cent of the tractor owners reported that the tractors have proved profitable investments. Of these more than one-third increased their acreage with tractors. On the other hand, of the men who found the tractors unprofitable only one-tenth increased their acreage.

The comparatively high percentage of tractor owners who have enlarged their farms, says the bulletin, is significant, for although farms have increased in recent years due to improved farm equipment the increase is not so pronounced on farms where tractors are not used.

## Selection of Suitable Size Essential

A suitable size should be selected for a given acreage, says the bulletin. In New York State the number of 3-plow machines sold in 1916 was less than one-third of the total of 2-plow outfits. In 1917 the 3-plow machines increased and amounted to two-thirds the number of 2-plow rigs, which would tend to prove that the 2-plow tractor is showing itself too small. Out of 237 farmers 118 reported 3-plow outfits were more suitable and only 110 recommended the 2-plow size. Nine stated that 4-plow tractors were the best. More than two-thirds of the entire number reporting originally bought 2-plow outfits.

The 2-plow machine is recommended by a majority of farm owners of 150 or fewer crop acres, but a considerable percentage of these also recommended the 2-plow machines, which, says the bulletin, leads to the conclusion that in general 2-plow tractors do not sufficiently increase the amount of work one man can do, and do not ordinarily develop enough power for operating separators, etc. The 3-plow tractor was distinctly the favorite among farmers operating 150 or more crop acres.

## What the Farmer Can Afford to Pay

Considering the cost of tractors the bulletin points out the price the farmer can pay depends on the amount and value of the work which the machine will perform annually, the value of horses displaced, value of man labor saved and the amount of increased returns which can reasonably be expected from its use.

## Highlights of the New York Tractor Report

Land surface .....	Rolling
Soil .....	Heavy loam-clay; sub-soil stones
Crops .....	Diversified
Tractor Advantages.....	Work more rapidly
	Save man power
	Do better work
Tractor Disadvantages..	Top soil must be dry
	Packs moist soil
	Inefficient operators
	Breakdowns
	Unsatisfactory on rough land
	Unsuitable on small fields
Tractors profitable for owners.....	84%
3-plow outfits in use.....	50%
2-plow outfits in use.....	46%
4-plow outfits in use.....	4%
Average cost of 2-plow tractor.....	\$775
Average cost of 3-plow tractor.....	\$1,050
Average cost of 2-bottom plow.....	\$120
Average cost of 3-bottom plow.....	\$145
Average tractor life expected.....	9 yrs.
Average No. days tractor used per yr....	54
Average No. days horses used per yr....	100
Average yearly repair bills.....	\$11
Average plowing per 10-hr. day—	
2-plow outfit.....	4½ acres
3-plow outfit .....	6¼ acres
Average cost of fuel plowing 1 acre—	
With gasoline .....	\$0.99½
With kerosene .....	\$0.49
Average No. tractors using kerosene....	75%
Average quantity lubricating oil used per acre .....	1 qt.
Average number hired operators employed .....	18%
Average depth of plowing.....	7½ in.
Average No. days tractors disabled.....	6¼ days
No. owners hiring tractor for outside work .....	42%

Prices paid in New York State in 1917 averaged \$775 for the 2-plow and \$1,050 for the 3-plow machines, while plow prices averaged \$120 and \$145 respectively.

The average length of life expected from tractors was reported by the farmers as 9 years, those whose machines had proved profitable estimating 9½ years, while those which had unprofitable investments gave an average of 5½ years.

Farm tractors in New York are used on a daily average of 54 days annually, including both home and custom work. On farms of 100 acres or less (average 81) average days used on the home farm totaled 33, while on farms of 150 to 250 crop acres (average 193) the outfits were used on the home farm 47 days. The tractors owned by the smaller farms were used considerably more it was found for custom work than the larger farm outfits. While these figures appear low, says the bulletin, it must be remembered that on farms where horses do all the work they only average 100 days annually and where both horses and tractors are used the machine need not be expected to have employment for as many days annually and even if the machine were to do all the work formerly done by horses it would not be employed 100 days per year because it works more rapidly than horses.

#### Repairs Depend on Operator's Efficiency

Repairs are needed according to the efficiency of the operator and the care he gives the outfit when in use or idle, the conditions under which the outfit is used, the load it is required to pull and the quality of the machine itself. Many tractors are kept in repair by the makers during the first year and the owners therefore do not bear the full expenses until the second year. Of 86 tractor owners in New York who have used their outfits one season or less (average 9 months) 31 reported nothing spent for repairs. The others have repair bills varying from a few cents to \$100, the average being \$17, making the average repairs for the entire group about \$11. Comparatively few machines go through their second season without repair charges. The average repairs for 102 outfits averaging 18 months old was \$34. For 30 machines averaging 30 months the average repairs amounted to \$101. These machines were almost exclusively 2- and 3-plow outfits. The 3-plow outfits were the most costly, but the larger machines also average more days' use annually since they were on larger farms. The figures given indicate annual repair charges during the first 3 years of about 4 per cent of the first cost, but this, says the bulletin, would undoubtedly increase in the latter years of its life.

#### Large and Small Gang Plows

According to the figures used by the tractor owners 2-plow outfits plowed 4½ acres per day (10 net working hours) and the 3-plow machines plowed 6¼ acres. Replies also showed that large gang plows will not cover as many acres per day as smaller ones when used under unfavorable plowing conditions.

Only 7 per cent of the tractor owners in New York State reported doing hauling with their outfits—the small percentage being due to the restrictions against the use of tractors on New York highways.

The cost of operating a tractor, it is pointed out, is made up of operating expenses including fuel, oil and grease, repairs, depreciation, and cost of man labor. In addition there are less important charges such as interest on the investment and housing. The New York farmers reported an average cost per acre plowed for gasoline, oil and grease of 99½ cents where gasoline is used and 49 cents where kerosene is used, with an allowance of 2 cents per acre for gasoline used in warming up. About 3½ gallons of either gasoline or kerosene was consumed per acre in plowing for all tractors reported. Less difficulty was also reported by owners of kerosene tractors as compared with a few years ago. Seventy-five per cent of the tractor owners reported that they were operating on kerosene.

The average quantity of oil per acre used in plowing was nearly 1 quart which, with oil at 40 cents per gallon, amounted to 10 cents per acre. Some reported using a gallon of lubricating oil per acre and others less than 1 quart per acre, with the 3-plow machines slightly more economical than the 2-plow.

Grease cost amounted to 2 cents per acre.

The average annual repair charges for the 2- and 3-plow outfits was 57½ cents and 78 cents per day respectively, making the repair charge per acre 12½ and 12½ cents respectively.

The average annual depreciation on the 2- and 3-plow outfits amounted to \$91.18 and \$123.54 respectively. The depreciation cost per acre was 37½ cents for the 2-plow and 36½ cents for the 3-plow.

#### 18 Per Cent Hired Their Help

Eighteen per cent of the tractor owners reported hired operators. Some entrusted their machines to ordinary hired hands at low wages and others secured first class operators at fairly high wages. The cost per acre for man labor with 2- and 3-plow outfits averaged 67 cents and 48 cents respectively, showing that the higher the wages paid the greater were the advantages derived from the larger tractors.

Estimating interest at 6 per cent on the average investment the average interest charged per day for the 2- and 3-plow outfits amounted to 43 and 58½ cents respectively, or the average charged per acre amounted to 9½ and 4¼ cents respectively. The greater the number of days a tractor is used annually, the bulletin reminds, the less the interest charge is per unit of work.

The approximate total cost for plowing an acre with a tractor under normal conditions is shown to be as follows:

Size of Tractor	Gasoline	Kerosene	Oil	Grease	Repairs	Depreciation	Man Labor	Interest	Gasoline	Kerosene
Two-plow	\$0.87½	\$0.37	\$0.10	\$0.02	\$0.12½	\$0.37½	\$0.67	\$0.09½	\$2.26¼	\$1.75¼
Three-plow	.87½	.37	.10	.02	.12½	.36½	.48	.09½	2.06	1.55¼

Approximate cost of plowing an acre with 2- and 3-plow tractors is based on average cost of \$775 and \$1,050, respectively, and a life of 8½ years of 54 working days per year.

In discussing economy of the tractor 185 of the 217 owners or 85 per cent reported a saving in the amount of hired help. Fifty-seven reported of saving average wages of \$213 annually, the equivalent of 1 man for 71 days at \$3 per day. Other savings which were overlooked in the reports were the use of the power for threshing, silo filling, shredding, etc.

More than 50 per cent of the tractor owners reported the quality of the work done by the tractor as better than that done by horses, while only 6 per cent said it was poorer. The quality of the work done, the bulletin points out, depends more on the plow and its adjustment than on the tractor. The average depth of plowing done by tractors in New York was over 7½ in., while the average depth previously plowed by horses was slightly less than 6½ in.

#### Capable Operators Scarce

Many owners reported difficulty in securing capable tractor operators. Although no figures were made available the answers showed definitely that it paid to secure first class operators at higher wages.

Forty-eight per cent of the 217 owners reported that their outfits were not disabled a single day when needed during the past season and of the remaining 52 per cent the average number of days their tractors were out of commission when needed was 6¼, not including 4 men who stated that their machines were out of commission a large part of the time. About 82 per cent of the tractors were operated by the owner or some member of his family, best results usually being obtained by this class of operators. Twenty-eight per cent reported no time lost in the field on account of trouble and the average time lost per day by the 72 per cent reporting trouble was a little less than one hour.

That tractors do not entirely displace horses was shown by the fact that in two-thirds of the cases the tractor was used only on the same number of acres as was previously farmed, in these instances displacing horses on an average of about two and one-half.

Many tractor owners used their outfits for custom work, 42 per cent reporting custom work, with the average number of days used annually for this purpose amounting to 24.

In summarizing, the bulletin states that the replies from the farmers do not indicate a considerable effect on the crop yields as a result of the use of tractors in the place of horses. It points out that it is obviously impossible to obtain maximum results with a tractor when it is used with implements designed for use with horses and that the plows used with it must be especially designed.

# The RETAIL NEWS

## New Truck and Tractor Dealers

The Tower Motor Truck Co., Greenfield, Mich., has appointed the following dealers: Fleet Motor Co., New York City; W. B. Bennett, Pittsburgh; Ideal Motor Sales Co., St. Louis; Ris Motor Co., Cleveland.

Chas. W. Tway Co., Atlanta, Ga., the Southern distributor of the Haynes automobile and the Wilson truck, has been appointed distributor by the Dauch Mfg. Co., Sandusky, Ohio, maker of the famous "The Sandusky Tractors."

Willis-Overland Co., Portland, Ore., will distribute the Moline tractor in 12 counties in the State of Oregon.

J. J. Hershberger, Hubbard, Ore., will distribute the Moline in northern Marion County; J. Dopplemier, St. Helena, Ore.; John Wonderlick, Banks, Ore.; E. L. Perkins, Hillsboro, Ore.; Ivy Paine & Son, Sheridan, Ore.

The Bush-Johnston Auto Co., Little Rock, Ark., is now distributor for the Briscoe and Elgin cars in central Arkansas.

The American Auto & Truck Co., Oklahoma City, Okla., has been chartered with \$25,000 capital stock by J. H. Marshall, W. C. Ayres and J. R. Reno.

Southard & Shinn, Baker, Ore., have been appointed distributors for the Acason in that territory.

The name Gullford Motor Truck Co., of Greensboro, N. C., which was circulated some months ago, was never really organized, the name being changed to the Southern Truck & Car Corp., which was organized April 13 last and will soon be ready to supply the trade. Office and factory are at Greensboro, N. C.

## Among Dealers, Garagemen and Repairshops

Smith-Paris Motor Co., Oklahoma City, Okla., has taken over the agency for the Packard in this territory.

C. H. Kingham, Wagoner, Okla., has purchased the Jefferson Highway Garage and also taken over the Ford Agency & Supply Co., formerly conducted by R. Z. Todd, and will conduct it from the Jefferson Garage.

The Doring Sales Co., 623 East Wilson Street, Madison, Wis., sustained a loss of about \$8,000 by fire of unknown origin in its garage, repairshop and warehouse. The company is a large distributor of passenger and commercial cars, tractors and power farm machinery. The loss is partly covered by insurance.

The Waupaca Motor Sales Co., Waupaca, Wis., is now owned and controlled exclusively by Lester H. Laux, who purchased the interest of F. D. Walden, who has been appointed district agent of the Standard Oil Co. in Waupaca and Portage counties.

The T. C. Wood Hardware Co., Rhineland, Wis., Maxwell dealer, has acquired a building at Davenport and Stevens Streets in that city, and is remodeling it into a garage, display room and service station.

The Ralph-Mishne Motor Sales Co., Cleveland, has been incorporated with a capitalization of \$25,000; incorporators, N. C. Ralph and J. S. Mishne.

Victory Garage, Ardmore, Okla., has been chartered with \$10,000 capital stock by A. D. Bailey, Ben Stephens and S. N. Dillard, all of Ardmore.

B. P. M. Motor Co., Clinton, Okla., has been formed with Boring, Perkins and Massey proprietors.

W. E. Howell, Covington, Okla., is a successor to J. W. Pickard in the garage and supplies business.

Claude M. Enos and Ralph E. Nugent, Springfield, Mass., will open a repairshop in Drumright, Okla., soon.

The Compton Garage, Big Springs, Tex., has secured the services of H. Grady Whitehead to manage the garage.

The American Auto Supply Co., El Paso, Tex., is installing an additional Dri-Kure retreading outfit and preparing to enlarge its plant.

The Spencer Carrol Co., Waco, Tex., will move to the building leased for five years in Dallas, and plans to open for business about Jan. 5. The company is wholesaler in automobile accessories, supplies and garage machinery. In addition to the two-story building it will be necessary to secure storage room for the \$175,000 stock.

The McGraw Tire & Rubber Co., manufacturer of automobile and truck tires, of East Palestine, Ohio, will open a branch in Kansas City and has closed a lease for space at 1607 McGee Street in which to operate its local branch.

The Two-In-One Tire & Auto Co., Farmington, Mo., has been formed for the purpose of repairing and rebuilding tires. The company has bought out the Robinson Garage. J. H. Orten is president and treasurer of the company and W. D. Bruce is general manager.

J. S. Rankin, Holden, Mo., has remodeled his garage, which was damaged by fire last summer.

Harry Knight, Holden, Mo., has sold his garage building and property to Galen Shigtlett, who will conduct a garage and salesroom.

Fred Perry, New Hampton, Mo., has purchased the equipments of Tom Chipp and also has charge of the East End Garage and a garage on Main Street.

The O. K. Garage, St. Joseph, Mo., was damaged by fire recently. The extent of the loss is estimated at \$500.

C. R. Wilson, Cottonwood Falls, Kan., is now located in the Central Garage, and is making sales and livery service a specialty.

Harry Burchinal and L. L. Chitwood, Conway Springs, Kan., have moved their garage to the Hyatt Building, and have added the agency for the Overland and Chalmers cars.

Charles A. Morrill, Hutchinson, Kan., has purchased the Exide Service Station at 107 Sherman East.

S. S. Mause, La Cygne, Kan., has bought the land and building now occupied by the La Cygne Auto Co. from C. J. Milton. He will erect a garage and automobile showroom. The building will be 50 x 90 and will be fireproof.

H. V. Orr and M. W. Boyd, Topeka, Kan., have bought the vulcanizing shop of George Wade.

Harry B. Flynn and Walter E. Loomis, Salina, Kan., have opened the Vesta Battery Service.

The Gates Rubber Co., Denver, Col., has closed a contract with the Johnson Brothers Auto Supply, Wichita, Kan., whereby Johnson Bros. become the sole agents in Wichita for the manufacture of Gates half-sole tires.

DeCastellane-Brown Motor Co., Tacoma, Wash., has purchased the Hainsworth Motor Co.'s agency in Tacoma, and will distribute Oldsmobile cars in western Washington.

Standard Tire Co., Tacoma, Wash., distributor of Mason tires, is now under the sole ownership of B. R. Kline.

The Kramer Motor Co., Grand Rapids, Mich., formerly the Kramer-Elgin Motor Co., distributor of the Pierce-Arrow, Marmon and Franklin, has added the Oldsmobile. E. H. Kerstetter, who for many years has been the distributor for the Oldsmobile in this territory, has joined forces with the Kramer company. The company will continue in its old quarters, 19-25 LaGrave Avenue.

The Quality Tire & Repair Co., Youngstown, Ohio, has been incorporated with a capital stock of \$10,000 by William Jamee and K. C. James.

Hill & Graves have bought the garage of Hammett Bros. at Topeka, Kan.

Anson Smith has bought the repairshop of Allen Hayes, Topeka, Kan.

Duncan Tire & Rubber Co. has opened a vulcanizing shop at 118 East Eighth Street, Topeka, Kan.

Phil Lingfelder has opened a new garage at Manhattan, Kan., and will do business as the Auto Mechanic Co.

Mowatt Cox has opened a magneto repairshop at 1603 Grand Avenue, Kansas City, Mo.

C. A. Hann and C. B. Helm have opened a general repairshop at 1001 Oak Street, Kansas City, Mo., and will do business under the style of the Atlas Auto Repair Co.

Ralston Motors Co. have opened a salesroom at 117 East Sixth Street, Topeka, Kan., and will distribute the Oldsmobile, Holmes and Pan cars.

### New Garages

Sam Laney.....Sallisaw, Okla.  
Rippee Bros.....Hartsville, Mo.  
C. S. Bailey.....Douglas, Kan.  
Davidson-White Motor Co..Quenemo, Kan.

## \$282,000,000 Truck Orders Cancelled

WASHINGTON, Dec. 6.—Contracts for motor vehicles cancelled by the War Department totaled \$282,000,000 and for airplane parts \$256,000,000, according to a statement made yesterday by Secretary Baker to the Senate Finance Committee.

## Canada Repeals Gasoline Rules

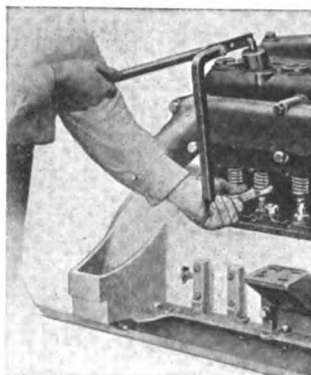
OTTAWA, Dec. 6.—Removal of all restrictions on the retail sale of gasoline is announced by the fuel controller. Dealers may therefore continue to do business as in the past.

The recent regulations were adopted following upon an investigation and report by Dr. McFall of the Cost of Living Branch of the Department of Labor. Since then a further investigation and report has been made and submitted by him, and as the conditions which necessitated regulations of the gasoline trade have now been relieved by the practical cessation of the war, an order-in-council has been passed on the fuel controller's recommendation entirely cancelling the present regulations. Dealers may now sell gasoline without license from the fuel controller, and the fees already paid will be returned to the applicants.

# Automotive Equipment

## VALVE-SPRING LIFTER FOR BUDA ENGINES

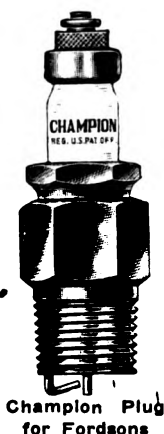
This is a valve-spring lifter especially for Buda engines and consists of a C-shaped clamp, the lower end of which is split to catch the valve cup and a lever with which the actual lifting is done. This lever is pivoted to the C in such a way that additional leverage is obtained and it is not necessary to exert much force to compress the spring. Price \$4—Buda Co., Harvey, Ill.



Buda Valve Lifter

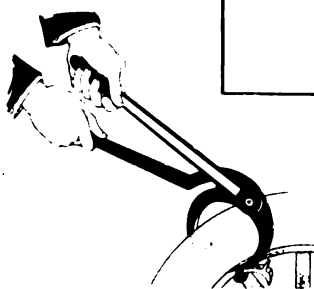
## CHAMPION SPARK PLUG FOR FORDSON TRACTOR

This is a special model of the Champion spark plug, especially made to fit the Fordson tractor, the length of the shell being just right to bring the electrodes into the combustion chamber. The fixed electrode has the same feature that characterizes the other Champion plugs, that is, the sparking end of the electrode is higher than the bend, so that any oil which may get on the electrode will run away from the sparking point. The porcelains are capped with a small brass shell. Price \$1.—Champion Spark Plug Co., Toledo, O.

Champion Plug  
for Fordsons

## KLINCHER TIRE TOOL

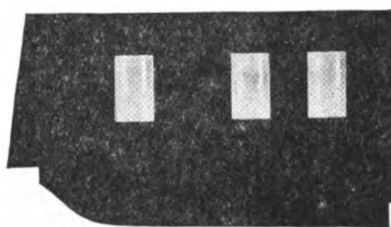
This is a tire removing tool shaped somewhat like a pair of tongs but with the head part at right angles to the handle. In action the tool grips both beads of the tire and sufficient leverage is obtained to remove or replace the tire without jerking, pulling or prying. Price \$3.—Klincher Tool Mfg. Co., Minneapolis, Minn.



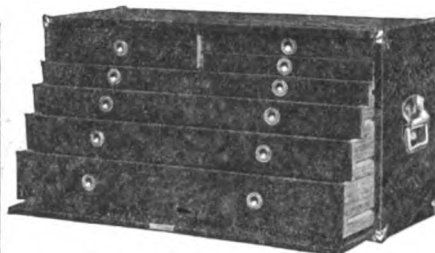
Klincher tire tool

## CLEVELAND SIDE CURTAIN SETS FOR FORDS

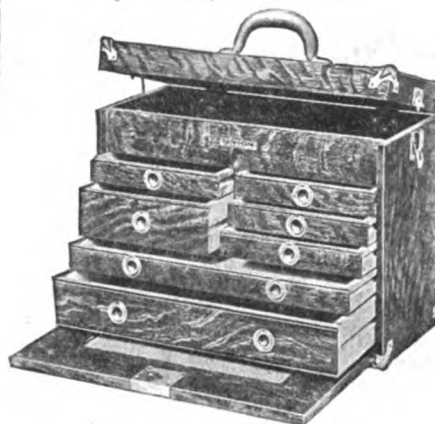
These curtain sets for Fords are made of heavy rubberized material and have a generous allowance of lights. They are made to exactly fit the car and all eyelets are furnished with the curtains. Made for all models from 1913 to 1918. Prices—regular side curtains for touring car \$15.50 per set, regular side curtains for runabout



Cleveland side curtain for Fords



Union Model E tool chest



Union Model B tool chest

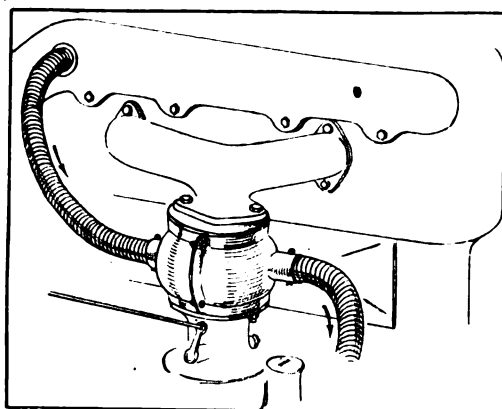
\$10.50 per set, roll-up style back curtains for back \$4.50 each, rubber back stays for touring car or roadster \$5 per pair.—Cleveland Top & Specialty Co., Cleveland.

## UNION TOOL CHEST

These tool chests are made with a number of drawers of different sizes to hold different kinds and classes of tools and instruments. The drawer construction is strong but light. The fronts are locked to the sides with a double lock joint and the three-ply bottom is tongued to the sides and front. The drawer pulls are rings which drop down flush. The frames are locked cornered and glued. Model E, with 7 drawers, case of quartered oak and drawers felt lined, is \$14. Model B, with 7 drawers, in quartered oak, is \$16.—Union Tool Chest Co., Inc., Rochester, N. Y.

## LO-SEE HOT SPOT

This is a mixture heater which is placed between the carburetor and the intake manifold. The inside of the device is spiral in shape and the inside surface over which the mixture is whirled has a number of small flutes to increase the radiation surface. The heat is supplied by running a portion of the exhaust gas through a flexible tube from the manifold to the heater and this hot gas passes around a number of fins which take up the heat and pass it through to the flutes on the inside. Will fit any make of car, truck or tractor. Price \$15.—Wee Specialty Co., 1806 Michigan Avenue, Chicago.



Lo-See hot spot

## THE DRAKE HYDROSCOPE

This device gives visual evidence that the cooling water is circulating because as long as it is circulating a small fountain of water is maintained in the hydroscope, and as soon as the water ceases circulating the fountain stops. It is made in two styles, Model C being mounted on the filler cap of the radiator and Model B being arranged to fit on the dash and having a small electric light so that the fountain can easily be seen at night.—Drake Manufacturing Co., Milwaukee, Wis.



Model B Drake Hydroscope





*Put  
These  
Displays  
in Your  
Windows*

# Christmas Windows

**NEXT WEEK—*Get Christmas Business by Using This Display***



Leave plenty of bare space here and there.

Have the masses of material placed about as shown. In the window at the left the main mass is at the center, with smaller masses at the sides. In the window at the right the mass is at the right end, with smaller masses at the center and left side.

Take a heavy pencil or crayon or small paint brush and make some cards. You may not be a master hand, but you CAN MAKE CARDS that will get by—and be read.

On gloves put some such sign as "Keep his hands warm—\$4.50." On anti-freeze say "Beat Jack Frost—\$2.00." Any catchy motto will get attention.

Use plenty of evergreen and red, and get in Christmas bells and other holiday atmosphere.

Then run an ad in the newspapers and tell folks to buy useful gifts and to take a look at your window.

And then turn on the lights, take a picture of the window by a night-time exposure and send it to Motor World.

## New York Show to Be Held February 1-15

One Week for Cars and Second Week for Trucks—Madison Square Garden to "Come Back"

NEW YORK, Dec. 9—Instead of having no show New York is to have two shows. The old double-show days are coming back under the auspices of the Automobile Dealers' Association of New York City.

After much negotiation the dealers have secured the Madison Square Garden, where the motor show was born a score of years ago and will put on shows for both cars and trucks, as in the old days before the truck got its real start in life. The passenger cars will be shown Feb. 1 to 8 and the trucks Feb. 10 to 15.

Dealers who used to attend shows under the Garden's vaulted roof will remember that extra floor space used to be secured by extending the balcony out over the main floor. This plan will be again followed, so that the floor space will be about as it was in the old days before the shows left the Garden to go to Grand Central Palace, which is now a military hospital.

Space arrangements are being made and within a short time the exhibition areas will be allotted to the New York dealers.

Some of the personal machinery of the former shows is retained and the campaign for big, successful shows is being pushed actively by Manager Charles A. Stewart and the show committee, which consists of: Chairman, Charles H. Larson, Cutting-Larson Co.; H. R. Bliss, Colt-Stratton Co.; Walter Woods, Van Cortlandt Vehicle Co.; William C. Poertner, Poertner Motor Car Co.; Harry J. De-Bear, Maxwell Motor Sales Co.; R. J. Gilmore, Packard Motor Car Co.

### Puritan Opens Eastern Branch

DETROIT, Dec. 6—The Puritan Machine Co. has made arrangements to open an eastern branch. It has secured property at 245 West 55th Street, New York City. The Puritan company distributes repair parts for over two hundred different models of passenger cars and trucks, a great many of which are owned and operated in the East. This will facilitate the delivery of repair parts in the Eastern district.

### St. Louis Dealers Get More Room

ST. LOUIS, Dec. 5—Local motor car dealers have begun to get ready for the new business.

The Velie Automobile Co. is removing from 3021 Locust Street to Garrison and Olive streets, just around the corner from Motor Row, into a building bought and rearranged for motor purposes. Larger space is the attraction. For a year the Velie used car department has been detached from the other business because of a lack of space. After the consolidation in the new building, each



*'A Lalley farm light plant made it possible for Detroit visitors to examine the inside of this war tank at night*

department will have more space and better arranged than formerly.

The Brandle Motors Co. is removing from the Plaza Building on the Lindell cut-off to 1422-30 Morgan Street, away from Motor Row. This company will discontinue retailing of the Chevrolet car and push the Westcott exclusively.

The retailing of the Chevrolet will continue at the Plaza Building under arrangements to be announced later.

### Truck Show For Philadelphia

PHILADELPHIA, Dec. 7—The Motor Truck Association of Philadelphia will hold a show in March, following the show of the Philadelphia Automobile Trade Association, it was decided at a meeting of the board of directors of the former organization. The motor truck show will be under the direction of a committee consisting of the officers and directors. J. D. Howley is president of the Motor Truck Association.

### May Is Back

NEW YORK, Dec. 5—George L. May of Adelaide, Australia, who visited the United States last summer, is back home. Motor World has just received a copy of the Adelaide Advertiser, dated Sept. 25, in which appears an interview with May, who emphasizes the determination of America to end the war quickly. He took back with him the agency for a small farm refrigeration plant.

### Moline Salesmen Divide Interests

MOLINE, ILL., Dec. 4—The Moline, Ill., Plow and Tractor Co., has decided upon a diversion of interests among salesmen commencing with Dec. 1. In the future, traveling representatives will handle tractors exclusively or farm implements exclusively. Previously, salesmen were required to handle both lines. All salesmen were called in and given

their choice. Some who had been selling implements for many years and before the tractor line was added, elected to go back to their first love, while some of the younger men, who found the tractor line fascinating, expressed a preference in the latter direction. It is believed that the separation of interests was advisable and that more satisfactory results would accrue and with advantage to both.

### Will Market Liberty Fuel Jan. 1

WASHINGTON, Dec. 6—The new motor power called Liberty fuel will be sold to the general public by Jan. 1, according to a new announcement by Capt. E. C. Weisgerber, the inventor. The base of the new fuel is said to be kerosene. The invention has been patented, and according to the regulations of the War Department the inventor may make it a commodity for public use. Three thousand gallons are reported to have been manufactured to date, this amount being used largely for experimental purposes. It is said that the new motor gas is composed of 80 per cent kerosene, the balance being chemicals that constitute the essentials of the discovery.

The price of the new fuel has not been fixed, but it is stated that the ingredients other than kerosene are of low cost and can be obtained readily.

### N. A. D. A. to Supply Speakers

ST. LOUIS, Dec. 5—The N. A. D. A. is ready to supply speakers on business efficiency and kindred topics to all dealers' meetings that may be held in connection with the shows.

This work has been undertaken in cooperation with a resolution adopted at the meetings of the Show Managers' Association at Cleveland. The N. A. D. A. approves so heartily of the plan to hold dealers' meetings in connection with the shows that it wants to assist.

## Boston's Automobile Row Witnesses Many Changes

### Dunbar Takes on Oldsmobile, MacAlman Drops Liberty, Hall to Handle Hupmobile

BOSTON, Dec. 7—The past week brought out news of several changes in the motor colony of Boston. The first one announced was that of the Oldsmobile. It had been handled by J. James MacGregor for some years, who had the wholesale and retail business. Some months ago retail sales were taken by the Bryant G. Smith & Sons Co., which also has the Cole Eight. MacGregor conducted the wholesale. A few weeks ago the Smith company decided to let the Oldsmobile go and MacGregor was to take it over again. But the factory signed up with Mr. Dunbar, of the Dunbar, Sanders & Bowen Co., that has the Oakland. Dunbar has formed the Oldsmobile Co. of New England, and it will have no connection with the Oakland agency. He has as a partner Mr. Dunn of Providence. They have taken over the Kissel building on Commonwealth Avenue for a sales and service place.

Next came the announcement that President J. H. MacAlman, of the Boston Automobile Dealers' Association, had given up the Liberty. C. I. Howell, who handled it for MacAlman, died some weeks ago, and the latter decided that he had enough to attend to looking after the Stearns-Knight.

George Leghorn, who has handled the Hupmobile for some years, is planning to take on the Liberty. He has released the Hupmobile and this line is to be taken over by Sherwood Hall, who a few years ago sold the Paige-Detroit in Boston before it became a factory branch.

Next Alfred H. Sowers gave up the Fulton truck. He intends to take on another truck line and also a passenger car which, with the Cleveland tractor, he will wholesale, giving up retail sales entirely. C. S. Ransom, who formerly had the Bethlehem truck, has taken the Fulton.

The death of Fred S. Smith left the Mercer on the market, and Frederick J. Caldwell, of Somerville, who was in the furniture business, secured the agency. He has leased a salesroom on Commonwealth Avenue and will open next week. The Kissel agency, handled by W. B. Aldrich, of the New England Velie Co., is in the market. The Henley-Kimball Co., agents for the Hudson, announce that they have taken on the Essex for New England.

### Starters for Lauson Tractors

NEW HOLSTEIN, WIS., Dec. 8—The John Lauson Mfg. Co., maker of the Lauson farm tractor, has placed a contract with the Christensen Engineering Co., Milwaukee, for Christensen starters with which all Lauson farm tractors will hereafter be regularly equipped. The Christensen starter differs from other starting

devices in utilizing the "carburetion principle" instead of electric or air systems. The Lauson is the first farm tractor, so far as known, to be regularly equipped and sold with other than an electric starter.

### Kentucky Has 65,870 Automobiles

LOUISVILLE, Dec. 6—The motor car in Kentucky experienced its most prosperous year in 1918, despite the war and the restriction on the production of automobiles. The actual increase in registration was 18,454 for the year. There are now 65,870 motor vehicles in use in the Bluegrass State.

To give an idea of the growth in Kentucky, the passenger car and truck registrations by years since 1911 are given herewith:

1911.....	2,868	1915.....	19,500
1912.....	5,147	1916.....	31,700
1913.....	7,210	1917.....	47,416
1914.....	11,746	1918.....	65,870

At present there is one car for every thirty-five persons in Kentucky.

Dealers and distributors say that if they can obtain all the passenger cars and trucks they need, more motor vehicles will be sold in this state than ever before. All during the present year, distributors have been begging for cars, and while there have been factory driveaways on a scale never contemplated before, they have been unable to supply the demand.

### War Industries Board to Die

WASHINGTON, Dec. 4—That the War Industries Board will be completely abolished on Jan. 1, 1919, was made evident to-day by the release of Bernard M. Baruch's letter of resignation by the White House. In this letter Baruch advised President Wilson that the War Industries Board would terminate all activities on Jan. 1, turning over those divisions which should continue permanently. The Conservation Division, which has had charge of such work as limiting the sizes of automobile tires, will come under the Department of Commerce. The division on petroleum and its product will be turned over to the Bureau of Mines. It can be expected, therefore, that all restrictions on industries of whatever nature excepting those which were formulated by the Conservation Division will be terminated and that 100 per cent production can be engaged in by all industries and companies.

### To Sell Pull-More Plant

NEW CASTLE, PA., Dec. 5—The plant and equipment of the Pull-More Motor Truck Co. is to be sold by the receiver on Friday, Dec. 27, at 2 p. m. Included is a brick building 100 x 500 and 20 acres of ground.

### Moon to Start Jan. 1

ST. LOUIS, Dec. 8—It is announced by Moon Motor Car Co. that production of motor cars will be resumed by that firm Jan. 1. It is said that the stock of materials on hand is fair. This company recently has been making 1-lb. naval guns.

## Bay State Gains 13,176 Passenger Cars in Year

### Truck Registration Shows a Jump of 25 Per Cent Over 1917—Expects \$2,184,408 in Fees

BOSTON, Dec. 7—Figures compiled by the Massachusetts Highway Commission for the first 11 months of this year relative to motor registrations, etc., show that the industry in the Bay State weathered the war very well.

Instead of a big falling off in the listing of vehicles there was a general gain, when a comparison is made with the same period of 1917. A year ago there were 147,301 passenger cars registered. This year there were 160,486, or an increase of 13,176.

And trucks did even better. In 1917 there were tabulated 26,964 and this year 33,011, a gain of 6074, which amounted to nearly 25 per cent. The fact that the Government took over so many truck plants with priority war orders, handicapping dealers from getting machines, and finally forbade dealers to sell to anyone not engaged in essential work, this makes the showing all the more remarkable. Even motorcycles showed a big increase.

That the war did not keep men from entering the motor field is shown by the gain in dealers. A year ago there were 2379 listed and this year there were 114 more added, bringing the total up to 2493. The only decreases were in the number of examinations of chauffeurs, due to lack of examiners, and also in the number of licenses issued to drive cars. The State will get \$2,184,408 from fees, and when the fines are added this will mean a net revenue of about \$2,250,000, which will be a gain of more than \$200,000 over last year. Here are the comparative figures:

	1917	1918	Increase
Cars .....	147,301	160,486	13,176
Trucks .....	26,964	33,011	6,074
Total vehicles ..	174,274	193,497	19,223
Dealers, etc. ....	2,379	2,493	114
Motorcycles .....	11,065	12,862	1,797
Licenses .....	69,487	67,828	*1,695
Renewals .....	144,742	167,312	22,570
Examinations .....	17,336	17,241	*95
Receipts .....	\$1,969,813	\$2,184,408	\$214,595

\*Decrease.

### Army Trucks For Mail

WASHINGTON, Dec. 6—The first step toward extensive use of Army trucks for mail service with discharged enlisted men as drivers was taken last week by the Post Office Department when it requested the War Department to release 7 trucks and 4 men for a 115-mile star route between Helper and Vernal, Utah.

This route now costs the Government \$78,000 a year, and it is estimated that by the use of Army trucks, and payment of \$4 per day to former soldier chauffeurs, the cost can be cut in half.

The Post Office will request 400 additional trucks and men shortly and increase the numbers as Army demobilization proceeds. It plans an interlacing

motor truck postal system with terminals extending from the Atlantic to the Pacific coast in the form of a U-shaped route, with the 3 points at Portland, Me.; New Orleans and Portland, Ore. At present a Portland, Me., and New Orleans route is in operation, with a 12-day schedule between the two cities. Motor truck routes have been operating successfully from the financial standpoint, one of 135 miles earning \$16,000 a month, with an upkeep cost of \$800.

It is expected that 20,000 motor trucks will be released by the War Department for this rural mail service.

According to the bill proposed by Congress, Army trucks and airplanes can be and are to be turned over to the postal officials by the War Department as they can be used for postal service following the war as they are demanded by the Post Office.

It is planned to have the Post Office authorities operate and subject to use thousands of motor trucks. The general plan also includes the establishment of mail service by truck chiefly at points where there is neither rail nor water facilities for hauling the mail matter, and by means of this it is expected that the territory of the United States which is now not enjoying the benefit of first class mail service will be efficiently linked with rail and water transportation by means of the motor trucks.

According to Fourth Assistant Postmaster James Blakslee, the introduction of a huge number of motor trucks into the mail service will consequently tend to complete the mail service throughout the nation, make more efficient the rural district life, especially those now suffering from poor means of communication and transportation, and will further tend to increase the importance of many communities which are now out of proper contact with the railroads and waterways.

#### President Exonerates Vincent

WASHINGTON, Dec. 6.—Lt. Col. Jesse C. Vincent, one of the designers of the Liberty airplane engine and formerly vice-president of the Packard Motor Car Co., and George W. Mixter, both army officers named by Charles E. Hughes in his report on the aircraft investigation as having violated a code, have been found completely innocent of any intentional wrong doing by Attorney General Gregory, and his recommendation that they be pardoned has been acted upon by President Wilson, according to an announcement from the White House last night. Col. Vincent, it was said by Attorney General Gregory, "rendered invaluable service in designing and perfecting the Liberty engine." He acted in entire good faith and took no advantage of the Government, said Mr. Gregory.

#### Champions on the Fordson

A story in Motor World of Oct. 16, regarding the Fordson tractor spark plug equipment, stated that another plug than that of the Champion Spark Plug Co., of Toledo, is standard equipment on this tractor. Champion plugs also are used on the Fordson in large quantities.

## Bigger, Better Show Is Milwaukee's Plan

### Will Stage It Jan. 24-30 and Automotive Dealers Will Show Cars, Trucks and Tractors

MILWAUKEE, Dec. 9.—The dates of Jan. 24 to 30 have been selected by the Milwaukee Automobile Dealers, Inc., for the eleventh annual Milwaukee show, to be held in the Auditorium. At a special meeting of the association, following the return of Manager Bart J. Ruddle from the conference of show managers in Cleveland, the action taken shortly after hostilities ceased to proceed with the 1919 show was ratified and confirmed, and dates were selected. Manager Ruddle was given free rein to provide the largest and most attractive show that has yet been held here.

N. E. Osmond, head of the Osmond Motor Car Co., Chalmers and Winton dealer, has been appointed chairman of the show committee. Assisting him are: Ray C. Chidester, manager Milwaukee branch Packard Motor Car Co.; Alfred Reeke, Nash; Leslie D. Frint, Oldsmobile and Oakland, and A. W. L. Gilpin, manager Milwaukee branch Ford Motor Co.

Milwaukee's 1919 show will be more of an automotive exposition than customary, due to the fact that many dealers have become tractor representatives in the last 6 or 8 months and will show the farm machine in connection with passenger and commercial cars. However, the intention of the association is to make it primarily a passenger and commercial car show in order to regain the advantage which was partly lost by the drastic curtailment of passenger car production during the latter part of the war period. Dealers feel that the passenger car will benefit by special attention to its promotion at the coming show.

#### Boston Back to Business

BOSTON, Dec. 5.—The armistice and proposed peace has rejuvenated the motor dealers in this city. Now they are planning to go after business again. And in order to get facts at first hand they have been journeying to the factories to learn things. On one train from Boston last week there were enough dealers to nearly fill an entire Pullman sleeper. They were heading for Cleveland, Detroit, Toledo, and cities in the West where the big factories are located. President J. H. MacAlman and several of the directors of the Boston Automobile Dealers Association were among them. They were all representatives who have a number of sub-dealers, and they wanted to see what they could do toward rehabilitating their organizations here, but they first had to know what they could do for the sub-agents. Most of them feel that they will be able to get back in line again the agents outside Boston who handled their lines. And having learned the lesson of meeting business conditions under difficult cir-

cumstances caused by war these dealers will be in a position to make more money now with less effort.

#### Show Likely

PHILADELPHIA, Dec. 6.—That an automobile show will be held here this winter, providing a suitable building can be obtained, was the expression of opinion at a meeting of the Board of Governors of the Philadelphia Automobile Trade Association. The Wanamaker garage, where the association held its show last year, will not be available and an attempt will be made to obtain the Commercial Museum building.

#### Reo Shows Healthy Increase

DETROIT, Dec. 5.—In the annual statement of the Reo Motor Car Co. for the fiscal year ending Aug. 31 the surplus of \$5,494,828, as compared with \$4,645,915 for 1917, does not show an extraordinary increase, though it nevertheless indicates the continued healthy growth of the business. The total assets show an increase of over \$1,300,000, as compared with 1917, while the current assets compare with \$8,836,922 for last year, an increase of over \$1,500,000. Considering the general conditions and the great reduction in the production of normal products, the balance of the company is considered most satisfactory.

#### Selden Organization Meets

ROCHESTER, N. Y., Dec. 6.—Division sales managers from every state in the Union attended the annual four day convention of the Selden Truck Sales Co., which ended here to-day. Various topics were discussed, including the design, production and merchandising of trucks and new methods of selling brought about by the sudden change from war to peace conditions.

From the large number of sales managers present it was evident that the Selden company was not one of those truck concerns which allowed its selling organization to deteriorate during the period when its large war orders were being turned out. The sale of trucks is to-day not one of production but of merchandising and the Selden company thus finds itself in the fortunate position of having an intact sales organization ready at once to serve the motor truck user under peace conditions.

#### Ralston Iron Adds Trucks

SAN FRANCISCO, Dec. 6.—The Ralston Iron Works, which for the past 4 years has been manufacturing the Ralston truck unit, has added trailers and semi-trailers to its line as well as pole and lumber dollies and special trailer equipment. The company has taken over the Hewitt-Ludlow motor truck plant, now under construction, and is planning to increase the production of Hewitt-Ludlow 1½ to 5-ton trucks. Pratt & Williams, which have heretofore distributed Ralston products, hereafter will be exclusive distributors.



## Iowa Tractor Trade Looks Like a Comer

### Des Moines Tractor Show Brings Dealers Together—Prospects for 1919 Business Good

DES MOINES, Dec. 8—Iowa is due for the same development in the tractor field that she has reached as a motor car owning State, which, incidentally, is first.

This is the opinion of tractor dealers, implement men and motor car dealers who have just closed the first tractor show ever held in the State in the Des Moines Coliseum.

There were some very disappointing things about the show, most important of which was the decline in attendance caused by the epidemic of Spanish influenza which has swept the State during the past 6 weeks, and which reached its height in Des Moines during the days of the show. While under the circumstances the attendance was satisfactory hundreds of Iowa implement dealers who ordinarily attend the annual convention of their association were kept at home either by sickness in their families or fear of traveling when the epidemic was so prevalent. The influenza conditions caused the show to be brought to a close 2 days earlier than scheduled.

In spite of these disappointing features there is no question that the show will serve as a nucleus for a bigger and better show next year.

The show was held directly under the auspices of the Iowa Implement Dealers' Association, and simultaneously with the show the Implement Dealers held their annual convention in another part of the Coliseum.

The Implement Dealers' Association received full support from the tractor dealers of Des Moines, including not only a number of motor car dealers but most of the threshing machine distributors which handle tractors.

It was primarily a business show and no attempt was made to introduce elaborate decorations or entertainment features. The decorations, however, were very satisfactory and an army band from Fort Des Moines played each afternoon.

No admission fee was charged and the expenses of the show were largely covered by the sale of space in the Coliseum. Booths 21 x 10 were sold to the exhibitors for \$65, and there were about sixty exhibitors, some few of which were general implement concerns and did not show tractors.

T. F. Wherry, of Hampton, Iowa, secretary of the Implement Dealers' Association, acted as business manager.

Discussion of service for tractor dealers furnished the most important part of the program during the convention. H. C. Wallace, editor of an agricultural journal, dwelt particularly on service in the opening address of the convention and one entire afternoon's session was given over to the discussion.

The matter of free service was debated at length and it was finally agreed to continue free service until the farmers had thoroughly learned their tractors.

The dealers represented in the discussion felt that free service was the best advertisement they had, as it was an assurance to the prospective buyer that he would be taken care of. However, the dealers agreed without dissension that the question of labor charges for repairs and new parts should be strictly on a paid basis.

Considerable time was spent in discussing who the best man to handle tractors was. The implement dealers, of course, claimed that their experience with gas engines particularly fitted them for the work in spite of the fact that the motor car dealers' sales organizations were admittedly better. However, as there were 100 implement dealers to every five motor car dealers in the convention there was little room for the motor car men.

In Iowa at least this case seems to be a three sided affair. The implement dealers, particularly in the small towns, feel that the tractor field is their own particular property. However, during the past 18 months, with the motor car industry temporarily curtailed by wartime restrictions, many of the more progressive automobile sales forces have entered the tractor field, and with their established sales methods have gained considerable headway.

Then there is the third factor, the thresher dealers who take issue with both implement men and motor car dealers. In Iowa there is a State threshermen's association, which at its annual convention in Des Moines has from 2500 to 3000 men from all over Iowa present. A majority of the members are farmers and the thresher dealers of Des Moines claim that a show put on by the threshermen's association, where a very large per cent of the attendance is from the farmer, the prospective purchaser, a far greater business can be developed than from a dealers' show, be it implement or motor car. The Des Moines Threshermen's Club is now considering holding an exclusive tractor show at the annual convention in February.

Both the thresher dealers and the motor car men taking part in the Des Moines show agree that the dates for the show this year were too early, and hold that as a business getter the show would be much more successful in late February or early March.

All factions in the field are agreed upon the question, however, that Iowa is due as a tractor State. The Hawkeye State for years has led in food production, and with the labor shortage and farm animal shortage as acute as they both are they feel that the tractor will be the all important factor during the next few years.

Exhibitors at the Des Moines show were as follows:

B. F. Avery & Sons Plow Co. .... Omaha  
Consigny Motor Truck Co. .... Des Moines  
DeBrown Auto Sales Co. .... Des Moines  
Turner Mfg. Co. .... Port Washington, Wis.

Sears Automobile Co. .... Des Moines  
Janesville Machine Co. .... Janesville  
Smalley Mfg. Co. .... Manitowoc  
J. D. Tower & Sons Co. .... Des Moines  
Oliver Chilled Plow Works. .... Moline  
Hayes Pump & Planter Co. .... Galva, Ill.  
Emerson-Brantingham Co. .... Des Moines  
Rock Island Plow Co. .... Rock Island  
Cushman Motor Works. .... Lincoln, Neb.  
DeLaval Separator Co. .... Chicago  
John Deere Plow Co. .... Moline  
Electric Wheel Co. .... Quincy  
Perfection Mfg. Co. .... Minneapolis  
Woods Bros. Thresher Co. .... Des Moines  
Parlin & Orendorff Co. .... Canton, Ill.  
Western Silo Co. .... Des Moines  
Wistrand Mfg. Co. .... Galva, Ill.  
Avery Company. .... Des Moines  
R. Herschel Mfg. Co. .... Peoria, Ill.  
Herring Motor Co. .... Des Moines  
Clemens Auto Co. .... Des Moines  
Dukehart Machinery Co. .... Des Moines  
Minneapolis Steel and Machinery Co. .... Des Moines  
Stover Mfg. & Engine Co. .... Freeport, Ill.  
Advance Rumley Thresher Co. .... Des Moines  
International Harvester Co. .... Des Moines  
Ketchum & Co. .... Marshalltown, Iowa  
Fairbanks-Morse Co. .... Chicago  
Joel Turney & Co. .... Fairfield, Iowa  
Townsend Mfg. Co. .... Janesville  
Central Iowa Motor Co. .... Des Moines  
Keystone Steel & Wire Co. .... Peoria  
Nu-Way Mfg. Co. .... Kewanee, Ill.  
Huber Mfg. Co. .... Des Moines  
Smith Stock & Wagon Co. .... West Bend, Wis.  
Vacuum Oil Co. .... Des Moines  
Miller Wagon Co. .... Calmar, Iowa  
Electric Storage & Battery Co. .... Chicago  
Blizzard Ensilage Cutter  
Indiana Silo Co. .... Des Moines  
Hart Parr Co. .... Charles City  
Des Moines Steel Tank Co. .... Des Moines  
Iowa Moline Plow Co. .... Des Moines  
Keystone Steel & Wire Co. .... Peoria  
Iowa Gate Co. .... Cedar Falls  
United Engine Co. .... Lansing  
Griffen-La Crosse Tractor Co. .... Mason, City

### Has "Idle Truck Bureau."

NEW YORK, Dec. 6—The Colt-Stratton Co. Metropolitan distributor of Day-Elder trucks, is maintaining an "Idle Truck Bureau." This has as its purpose co-operation with owners of Day-Elder trucks who desire to rent them to merchants for emergency service. In this way those Day-Elder truck owners engaged in a regular renting business or general forwarding business can keep their trucks working practically the entire time.

All business houses or individuals who have need for such truck service can be put into communication immediately with firms operating Day-Elder trucks with most every type of body, including dump bodies with hoists, and in every capacity from 1½ to 5 tons.

### Canada After Roads

MONTREAL, Dec. 5—The demand for federal aid in the construction of main highways across Canada is not only being urged by the Good Roads Associations of Canada, and the various automobile organizations, but has been taken up strongly by the Association of Canadian Building and Construction Industries.

This week nearly two hundred of the most representative contractors and suppliers of the Dominion, drawn from Victoria to Halifax, have been conferring in Ottawa on reconstruction matters, and when the Acting Prime Minister, Sir Thomas White, and the Minister of Public Works, the Hon. F. E. Carvell, came down to meet them two days ago, one of the petitions made was that federal aid should be given to highway construction and that the work should be done by contract.

## Electric Starters for 1919 Ford Sedans

### Slight Change in Price of Cars So Equipped—Chassis Will Not Be Mechanically Changed

NEW YORK, Dec. 7—The new Ford sedans are to be equipped with an electric starter.

There will be a slight change in the price of the cars to cover the installation of the starter, which will be standard equipment for 1919 on as many cars as it is possible to obtain starters for.

There are to be no mechanical changes in the Ford chassis except for some slight alterations made necessary to accommodate the starter.

Information regarding this radical departure from previous practice of the Ford Motor Co. comes to Motor World from an authentic source. Rumors to the effect that Ford contemplated a change of this character have been current many times during the past 2 years, and at one time it is known that a starter actually was developed and negotiations carried to the point where its equipment on all Ford models was practically assured. Later, however, difficulties arose which precluded the possibility of its addition.

The starter which is to be used is one which has been developed and is now being produced by the Liberty Starter Co., which was organized originally to build starters for the Government and obtained a contract for 16,500 of them. A number of these have been furnished for use on Government tanks and other automotive equipment in the American Expeditionary Forces. Latterly the Government contract has been canceled and it is understood that the Ford Motor Co. has contracted to absorb the entire output of the factory.

The Liberty Starter Co. occupies a factory of moderate dimensions and its present output is approximately 500 starters a day. Another building of the same size is to be built immediately and the output more than doubled. The starter will be supplied exclusively to the Ford Motor Co.

### Mammoth Truck Repair Depot

BALTIMORE, Dec. 5—One hundred and fifty acres of uncultivated land converted into a beehive of industry; a motor truck overhaul plant of 200,000 sq. ft., capable of fully assembling 30 motor trucks per day; a packing plant 800 by 200 ft. with a capacity for completely crating 20 trucks per hour; a storage and shipping department with a capacity for handling 2200 tons of spare parts monthly—in brief, a complete organization of 7000 men and a factory which with a slight expenditure could be the equal of many truck producing plants—this is Camp Holabird, the largest motor truck overhaul depot in the world, and erected within the last 10 months at this city.

To-day the camp has an organization of 7000 men.

It has cleared as high as 1400 trucks a month, overhauled, crated and shipped.

It has trained as many as 4000 motor mechanics within a month and shipped them abroad to the American Expeditionary Forces.

It has had as many as 7000 trucks in storage at one time.

It has completely torn down and overhauled and assembled 48 trucks in a day.

It has shipped 2200 tons of spare parts in a month. It has disassembled and completely crated and shipped 115 trucks in a day.

Occupying land to the northeast of Baltimore, the camp is to-day a mass of machine shops, tents, barracks and warehouses. The overhaul shop, 497 ft. by 480 ft., one story high, comprises 28 departments including chassis bays where the trucks are torn down, where the engines are completely inspected and repaired, and the final test room where the trucks are reassembled and inspected, following which they are given a 50-mile road test and sent to the reserve park.

In addition there are complete welding, drilling, painting, wood working, tire repair and other departments. Painting is done by a spraying process which takes 15 minutes per truck. The shop has a stall capacity for 120 complete overhaul jobs at once.

### Haynes Continues its Line

KOKOMO, Dec. 6—The Haynes Automobile Co. will continue to build both six-cylinder and twelve-cylinder automobiles, increasing production of both as fast as plant capacity is released from war work. All models are to be built with 127-in. wheelbase. Five body types are offered in both lines. They are the "Fourdore," a roomy four-passenger roadster with four doors; a seven-passenger touring car, seven-passenger four-door sedan, four-passenger coupe and a limousine.

### Big Publicity for Kopacs

DAVID CITY, NEB., Dec. 5—After the editor of the Butler County Press had attended a sales dinner of Kopac Brothers, this city, he devoted most of his front page to a story of their business and a history of how the brothers, Emil, Joe, Ed, Frank and Anton, built their business. They have branches in Columbus, Schuyler and Norfolk, and handle cars, trucks, tractors, farm lighting plants, tires, oils, greases and accessories, their volume, wholesale and retail, running to nearly \$1,000,000 a year.

### Pence Adopts Name "Automotive"

MINNEAPOLIS, Dec. 5—The Pence Automobile Co., which distributes the Buick, the G. M. C. truck and the Sampson tractor in 400,000 square miles of the territory of the Northwest, has adopted the name "Automotive Distributors" and is using it on its letterheads. This word more adequately describes their business which has expanded beyond automobiles alone.

## How Can the N. A. D. A. Help the Small Dealer?

### Manager Moock Wants to Know So He Can Set the Necessary Machinery Going

ST. LOUIS, Dec. 6—Manager Moock of the N. A. D. A. has asked the secretaries of the local associations of the country to tell him how the National association can supplement their work and in what way it can be helpful.

It is Mr. Moock's idea that good can come from any association only as its members co-operate. With this idea in view he is seeking to enlist the local associations. During the last week he mailed a letter to the secretary of each association on his mailing list. This was 65, but he detected some errors in the original list and he wants any secretary who did not receive the letter to get into communication with him at once. The letter sent out follows:

Gentlemen:

In accepting the position of Business Manager of the National Automobile Dealers' Association, after having served both a local and states organization of Automobile Tradersmen, we hereby tender you the services of this office in licking the many problems of the dealers in your respective territory, but in order to do this successfully with as little confusion as possible, we should appreciate your views on this subject.

What is considered your biggest problem? In what manner can the N. A. D. A. best serve the interests of the dealers in your territory?

In what manner has this association disappointed you or your constituents? (Assuming, of course, that there may be some that are disappointed.)

It is our desire to correct mistakes and avoid them in the future. (N.B.: In your criticism, if you have any, please bear in mind that the association has been in the formative period and now for the first time is squared away for quick action.)

Further alluding to the above, while it is true that the association has accomplished wonders since its inception and has been congratulated many times, we invite your criticism, but in so doing, in the interest of fair play and real progress, constructive criticism is always welcome.

The officers and board of directors have unselfishly striven to make the association a real one, their only hope of reward being to make the automobile business a better business. Especially is this true of the inestimable services rendered the industry as a whole by President Vesper and his associate members at Washington in legislative matters, the value of which cannot be calculated in money and to which we assure you he will continue to give his personal attention in the future as in the past.

Can you suggest a plan whereby the membership of this association in your territory can be brought to the one hundred percent basis? How can the N. A. D. A. help in this?

Have you mailed to this office a list of your members who are eligible for membership in the N. A. D. A.? If not, will you do so? We should also be pleased to place on record small local associations and their officers' names.

Have you been receiving the Bulletins mailed from this office? If not, let us know and you will receive them.

In conclusion, please accept our apology for imposing upon your time. We have only the interest of the trade at heart and we are certain in assuming that only through the co-operation of the entire industry can we ever hope to reach the pinnacle of esteem and respect of the public, factories and our fellow tradesmen.

We thank you and assure you that it is a pleasure to serve you. One for all—all for one. The National Automobile Dealers' Association. H. G. Moock, Business Manager.

## Fordson Dealers Hold Sales Conference

**Association Is Promised Unstinted Co-operation by Company—Price of Tractor Unchanged**

DETROIT, Dec. 9.—A 100 per cent representation of Fordson distributors attended the sales conference at the Fordson tractor plant in this city on Thursday, Friday and Saturday of last week. Of distributors and executive men in their employ more than 100 were present. The conference was devoted almost exclusively to an open discussion of the prospects for the coming year and the policy which would be pursued by the distributors' association in handling it. No definite action was taken on many of the things affecting policies, but committees were appointed from among the members of the association which will take these matters under investigation and report conclusions to Henry Ford & Son for final decision.

Probably, as far as the distributors are concerned, the official recognition of the association by Henry Ford & Son was the most important outcome of the conference. C. E. Sorensen, in addressing the conference, said that the firm of Henry Ford & Son was heartily in accord with the principles underlying the organization and that henceforth it should receive the approval and hearty co-operation of the company. Matters affecting the distribution of the tractor will be referred to the association and handled through committees, subject to the approval of the officials of Henry Ford & Son, who are recognized as honorary members of the association and who constitute, practically, an executive committee with final authority.

It was decided at the conference that there will be no immediate change in the price of the Fordson tractor, which will continue at \$750, f.o.b. Dearborn, as heretofore. About the only change from past custom in this respect was the agreement by Henry Ford & Son to ship tractors in carloads hereafter, payable upon delivery and not with sight draft attached to bill-of-lading, as has been the custom.

The kind and quality of service which the dealers shall render on Fordson tractors was discussed exhaustively. The real purpose in calling the conference to Dearborn instead of the meeting which had been scheduled for Chicago was to impress upon the distributors as a body the obligation that they and their sub-dealers owed to the country at the present time to do all they could to further agricultural operations. It was pointed out to them, emphatically, by officials of the company that it was the ideal of Mr. Ford and the purpose of the company to be of the utmost assistance to the American farmer, and the distributors were called upon to pass this message along to their sub-dealers and to assure them that, even though the necessary service on the Fordson tractor for the next year or so should cost them actual money, still

in the long run they would be compensated by the reputation they would make and the increased trade they would secure.

The consensus of opinion of the distributors was that free service should be limited practically to delivery and starting the tractor with preliminary instructions of the farmer in operation, subsequent service to be charged for at rates depending upon local conditions. The recommendation was made that in all cases where it was necessary to supply spares, the local service man make an investigation to determine whether the breakage was due to the fault of the operator or to mechanical defects. This would determine the charge which should be made.

Regarding the equipment which will be used with the tractor, while it was not made conditional upon the distributors, still it is understood that if they sell equipment at all, it will be only such as has received the approval of Mr. Ford. An implement committee was appointed to consider the merits and claims of all operative equipment, both in the line of tillage tools and belt power machinery, and then to recommend the adoption of such implements as meet the requirements.

## Price Changes

### Mitchell Prices Are Dropped

RACINE, Dec. 9.—The Mitchell Motors Co. has revised the prices of its cars and returned them to pre-war basis as follows:

Model	New Price	Old Price
B-40	\$1,275	\$1,465
C-42	1,525	1,735

### Allen Prices Down \$100

FOSTORIA, O., Dec. 7.—The Allen Motor Co. has reduced the prices of its cars \$100 each, effective Dec. 2. New and old prices follow:

Model	New Price	Old Price
41	\$1,195	\$1,295
Sedan	1,695	1,795

### Overland Reduces Price \$110

TOLEDO, O., Dec. 9.—The Willys-Overland Co. has reduced the price of its Model 90 touring car, effective immediately, from \$1,095 to \$985.

### Saxon Price Reduced

DETROIT, Dec. 6.—The Saxon Motor Car Corp. has reduced the price of its 6-cylinder passenger car from \$1,295 to \$1,195, effective at once.

### Simplex Will Be Continued

NEW BRUNSWICK, N. J., Dec. 9.—The entire assets and good will of the Simplex Automobile Co. will be placed on public sale at 10 a. m., Dec. 20, by the Wright-Martin Aircraft Corp., which owns and controls the Simplex company. The sale is merely for the purpose of simplifying accounting methods between Wright-Martin and its subsidiaries and does not mean that the Simplex company will cease to exist. Wright-Martin has every intention of continuing the company as a going concern.

## Canadian Sales Slow ; Revival Is Expected

**Anticipated Price Cut Disturbs Trade—Several New Canadian Ventures in Sight**

WINNIPEG, MAN., Dec. 5.—Dealers all over western Canada report that sales have been very slow since the signing of the armistice, and the general opinion of the public seems to be that prices will take a very material slump in the near future. Just what this relief is based upon is hard to understand. The scarcity and high price of steel put up the price of motor vehicles during the past year, and the prices of all high grade steels have continued to advance since the signing of the armistice.

Used car values have not decreased to any material extent. A used car is worth just as much now as a car in similar condition sold for in July, and it is unlikely that any lower prices can be expected before May or June, and then the drop will be small.

Others are counting on a drop in the price of tires. This is possible, but not probable, in the near future, for the high price of tires has been due to the old law of supply and demand, and the supply of rubber is none too large. Even though demobilization proceeds rapidly it will be several months before all the army trucks are out of commission. Then, too, the ban on private passenger cars in England is likely to be raised and then there will be a big demand from the little isle for rubber tires.

The one article essential to motoring on which we may expect a drop in price is gasoline. Even before the armistice was signed the oil companies operating in the Middle Western States dropped the price of gasoline several cents a gallon. One report was that the companies did this to avoid Federal control of prices, but whatever the cause, the price went down, and it is just possible that the Canadian companies will see their way clear to adopt similar methods.

American manufacturers, and those having Canadian assembly plants, will not have things all their own way after this. At least two well known English concerns are looking over the Canadian field, and there is a report in eastern motor circles that the Crossley people will have a Canadian factory at Toronto by next June.

A big munitions plant in Toronto is looking around for a new line of endeavor, and it is said that this plant will be turned into an automobile factory and will manufacture both cars and trucks.

The Lexington car, which has been popular in eastern Canada for the past two years, is also after the Canadian market in real earnest, and a report from Montreal states that it will manufacture a Canadian model in the city.

In the tire field there will be a Canadian invasion by at least one company.

## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

R. P. Greene, who has been in charge of purchasing and credits at the Boston branch of the Motor Car Equipment Co., has tendered his resignation, which is to take effect very shortly. E. L. Allis, who has formerly been in charge of sales, will become manager of the entire Boston organization and will be assisted by Harry T. Watkins, who went to Boston from the main office at New York last Spring.

Lt.-Col. Barret Andrews, head of the Training Section Motor Transport Corps, has received his discharge from the army and will return to his civilian pursuits.

J. C. Benedict, formerly connected with the Olds Motor Works, and more recently with the Clyde Cars Co., has connected with the Acme Motor Truck Co., Cadillac, Mich., and been appointed district manager for the states of Delaware, Maryland, Virginia and North Carolina.

Fred J. Vandemark has been made special representative in the eastern part of the United States for the Acme Motor Truck Co., Cadillac, Mich.

Rex W. Wadman, technical advertising counsel, has re-established his New York office at 16 Beaver Street, New York, having completed his work for the Ordnance Department, U. S. A.

Frank A. Storer has resigned as general manager of the Wire Wheel Corp. of America to return to his former activities in the foreign market field. The first of the new year will find him ensconced as junior partner of the Argentine firm known as Storer & Co., with headquarters at 361 Calle Chacabuco, Buenos Aires to re-engage in the business of importing American goods.

L. A. McKay has sold out his Franklin dealership in Minneapolis. For the past year he has continued the sale of Franklin cars with the new dealer under the purchase agreement.

Charles W. Nash, who on July 15 accepted appointment as assistant to John D. Ryan, director of aircraft production, in charge of engineering and production, has resigned and resumed his official connection as president and general manager of the Nash Motors Co., Kenosha, Wis.

James A. Bennett has been appointed purchasing agent of the Connecticut Telephone & Electric Co., Meriden, Conn. This appointment is in the nature of a promotion for Mr. Bennett, who for some time past has been connected with the sales department of that company.

### Toback Returns to New York.

NEW YORK, Dec. 9—Samuel S. Toback, who some months ago left New York to become president of the Redden Motor Truck Co., Chicago, has returned to New York to become general sales manager of the Marmon Automobile Co. of New York. This company, which controls the Metropolitan distribution of Marmon cars, has just added similar distribution of the Hupmobile, which up to recently was handled by Charles E. Reiss.

Toback will have charge of both wholesale and retail sales of both lines.

### Seeger Heads U. S. Rubber

NEW YORK, Dec. 9—Charles B. Seeger has been elected president of the U. S. Rubber Co., succeeding Samuel P. Colt, who becomes chairman of the board of directors. Mr. Seeger is president of the Union Pacific Railroad Co., and for the past two years has been a member of the board of directors and of the executive committee of the U. S. Rubber Co. Lester Leland, for many years vice-president of the U. S. Rubber Co., was elected vice-chairman of the board of directors.

### Herbert C. Severance

Herbert C. Severance, secretary and sales manager of the Racine Rubber Co., Racine, Wis., died at his home in Racine on Nov. 23 of pneumonia, growing out of an attack of influenza. Mr. Severance was born in Cambridge, Mass., on Oct. 28, 1878. Originally he began his association with the tire and rubber industry with the Hartford Rubber Co., Hartford, Conn., later going to Minneapolis, Minn., as branch manager. In 1913 he became general sales manager of the Racine Rubber Co.

### Want Duty Put Back on Tractors Going Into Canada

NEW YORK, Dec. 6—Canadian manufacturers of farm implements and tractors have entered the lists with the Consolidated Grain Growers over the importation of American tractors into Canada duty free. They claim that this practice is having a deleterious effect on Canadian industry and should be stopped. The Grain Growers, on the other hand, insist that the Canadian industry is not adequate to care for the tractor demand of the Dominion and that cheap tractors should be permitted to enter without duty.

Early in 1918 the Canadian government eliminated the duty on farm tractors costing less than \$1,400. This was done as a war measure and to encourage food production. Larger tractors have never been found suitable for use in Canada. In consequence of the elimination of the duty, four times the number of tractors were imported into Canada in 1917 as in the previous year. During 1917, 2,792 American tractors valued at \$3,259,670 were imported in Canada. During the period between Feb. 7 and Oct. 31, 1918, a total of 8,684 tractors valued at \$7,993,916 was imported.

The normal import duty on farm tractors is 20 per cent plus a special war tax of 7½ per cent. Farm implement manufacturers would like to see this tax applied as before the special exception was made. They contend that this duty is necessary to protect Canadian industry.

## Kansas Tractor Show to Be Held Feb. 24-Mar. 1

### Has Endorsement of Industry - Exhibition to Help Farmer Select Tractor Best for His Needs

KANSAS CITY, Dec. 6—The fourth annual national tractor show will be held in a temporary building, steam heated and electric lighted, on the Union Station Plaza, Feb. 24 to March 1, dates coincidental with the motor car show. There will be 90,000 sq. ft. of floor space, an increase of 50 per cent over last year. The tract on which the building will stand is 120 ft. wide at the west end, 500 ft. wide at the east end and 480 ft. long.

Guy H. Hall, secretary of the Kansas City Tractor Club and manager of the show, has received endorsements of it from various associations of the industry, and directly also from J. F. Cook, Assistant Secretary of Agriculture at Washington. The Government and other authorities promoting readjustment, distribution of labor, production of foods, are encouraging the tractor show because of the large part the tractor will take in these enterprises. Attention is being called to the fact that many thousand men have become skilled tractor operators, and other thousands have been trained in truck mechanism in the army schools and in work with army branches.

The country, the business men, the farmers, have already been pretty well convinced of the timeliness and utility of the tractor as now produced. The National Tractor Show is expected to give the farmer in this territory the chance to learn which particular tractor he needs on his farm.

### War Adjustment Committee for M. A. M. A.

NEW YORK, Dec. 9—The Motor and Accessory Manufacturers' Assn. has appointed a War Adjustment Committee with full power to act and to establish, if necessary, a Washington office. The committee has been formed to do such work as is necessary for M. A. M. A. members in matters relative to reconstruction policies and particularly to cancellation of government contracts. Members of the committee are: Chairman Charles E. Thompson, president Steel Products Co., Cleveland; Christian Girl, president Standard Parts Co., Cleveland; Alexander W. Copland, president Detroit Gear & Machine Co., Detroit. R. M. McConnell will represent the committee in Washington.

### 500-Mile Sweepstakes Coming Back

INDIANAPOLIS, IND., Dec. 7—There will be a 500-mile race at the Indianapolis Motor Speedway this coming year. May 30 is the date; \$50,000 is the purse. This announcement comes from C. G. Fisher, J. A. Allison and A. C. Newby, owners of the Indianapolis course.

## Philadelphia "Jubilee" Starts with a Rush

### The City's Trade Banded Together to Keep Open House and Show the Public They're Back

PHILADELPHIA, Dec. 7—The Philadelphia motor car and accessory trade prosperity jubilee is on.

That fact is proclaimed all up and down Automobile Row proper, in the North Broad Street district, and in those lesser "rows" that cluster about the Schuylkill River on both Market and Chestnut Streets.

The motor car industry is back on a peace basis and the Philadelphia trade is taking this means of showing it to the public.

"We're on our toes and ready to push business as it never has been pushed before," says L. S. Bowers of the L. S. Bowers Co., distributor of the Cole and United States trucks, and who is chairman of the jubilee committee.

And that remark covers the situation.

The jubilee—the only one, at least so-called in the entire country's trade in the "back-to-business" program—is not focused; that is, it has no central point, no hall, or armory where orchestras play and society parades. It extends to all the places of business of those in sympathy with the movement—motor truck specialists, tire men, handlers of all sorts of accessories and lighting systems related to the trade.

The jubilee consists of a special, concerted bid to the public to look at the industry as a thoroughly revived one, to call and see its attitude of readiness, to think motor cars and talk motor cars and examine them at leisure and consult with managers and salesmen over their needs and desires for the coming prosperous golden year.

The trade in Philadelphia wants appreciation of its readiness and poise for the coming business and to show, incidentally, that there is no need and no probability of a drop in prices. At the jubilee, with the public as guests, there will be no attempt to push sales on the floor during the period of the program. Salesmen are there—yes; but they are there mainly to answer questions, to show what the public wishes to see; to explain and to suggest.

Decorations, largely patriotic and including ferns, palms, rugs and drapes, are prominent factors in the jubilee. And at night, extra lights beckon the passerby. In a few instances large electric signs are displayed, but these are chiefly on "Automobile Row" proper. Off the beaten track, while the showrooms are brightly lighted after sundown, and there are decorations, too, there is not quite the same carnival effect as along North Broad.

Every house in the jubilee "pact" is keeping open until at least 10:30 at night and some a half-hour later. The first crowds to-night were gratifying and showed interest in the new models.

Of course, there is a jubilee fund. It was necessary for advertising purposes. The committee, early last week, had expected about \$14,000 from the subscribers to the plan. The assessment, or subscription is graded according to the number of agencies each house handles.

The advertising is attractive. Five hundred lines are being taken daily in each of the seven local daily newspapers for the 14 days of the jubilee, or 3500 lines a day. The copy is changed daily and is worded cleverly.

The idea is the outgrowth of a luncheon conversation at the Philadelphia Automobile Association, only about 2 weeks ago. The plan was so heartily indorsed by the few who formed the nucleus, that immediate telephone messages were sent to leading members of each allied trade, as well as to those in the automobile and truck and trailer lines. The committee, which consists of L. S. Bowers, chairman; Harry B. Harper, J. S. Gomery, Herbert S. Taylor and W. A. Almy, quickly went among the trade and sounded the general sentiment. The response was so gratifying that the jubilee was assured.

Sales of some houses' cars already have jumped, apparently through the revival of confidence, dealers are optimistic and the table for the business feast appears to be spread.

The firms observing jubilee week are as follows:

Automobile Sales Corp.....Cadillac  
Autocar Co. ....Autocar  
Berrodin Rubber Co.....Accessories  
Bigelow-Willey Motor Co.,

Paige; Bessemer truck  
L. S. Bowers Co., Cole, Liberty; U. S. truck  
B. L. P. Motor Co.

Premier; Denby truck; Duplex truck  
Buick Motor Co.....Buick  
Chevrolet Motor Co.....Chevrolet  
Samuel Earley Motor Co., National; Mercer  
Eastern Motors Corp.,

Standard Wilcox trucks  
Foss-Hughes Co.....Pierce-Arrow  
Fiat Motor Co. of Pennsylvania.....Fiat  
Fanning-Mathis Co.,

Marmon; Standard truck  
B. F. Goodrich Co.....tires  
Goodyear Tire & Rubber Co.....tires  
Gomery-Schwartz Motor Co.....Hudson;  
Essex; Stewart trucks; Knickerbocker  
Form-A Tractor.

Girard Automobile Co.....Peerless  
W. Clarke Grieb..Kissel; Briscoe; Redden  
trailer

Gaul, Derr & Shearer Co.....accessories  
Hurley Motor Co., Reo, Reo truck; Sandow  
truck; Four-Wheel Drive truck

Herbert Bros.....Chandler  
Kelly-Springfield Tire Co.....tires  
Keystone Auto Sales Corp.....Studebaker  
Lexington Motor Co. of Pennsylvania,

Lexington  
LaRoche Bros., Inc., Velle; Scripps-Booth;  
Velle truck

Larson Oldsmobile Co., Oldsmobile; Master  
truck

McCurdy-Brainard Co.....Jordan  
Murray Motor Sales Co., Revere; Schacht  
truck

Maxwell-Chalmers Sales Corp., Maxwell;  
Chalmers; Maxwell truck

J. H. McCullough & Son.....Overland;  
Bethlehem truck

Penn-American Motor Car Co., American Six  
Philadelphia Nash Motor Co., Nash; Nash  
trucks

Packard Motor Car Co.....Packard  
Pennsylvania Rubber Co.....tires  
Stewart Automobile Co.....Auburn  
J. Harry Schumacker & Co., Dorris truck  
Stanley Motor Car Co.....Stanley  
W. D. Shepherd.....Allen  
Sweeten Automobile Co.....Franklin  
Tioga Automobile Co.....Saxon; Case  
William T. Taylor.....Apperson  
Troy Trailer Co.....Troy trailer  
United States Tire Co.....tires  
The Winton Co.....Winton  
White Co.....White  
Westinghouse Air Spring Co., air springs  
Thornton-Fuller Automobile Co., Dodge;  
Dodge commercial cars; Simplex; Graham  
Bros. truck-builder.

Locomobile Co. of America.....Locomobile  
Gawthrop & Wister, Inc., Clydesdale trucks  
Firestone Tire & Rubber Co.....tires  
Swain-Hickman Co.....Republic trucks  
Henry A. Rowan, Jr., Co., Haynes; Dearborn  
truck  
Thirteen Ford Dealers.....Ford cars

### 1,718,000 Vehicles in 1918

WASHINGTON, Dec. 6—Production of passenger cars and trucks, by quarters, for 1918 is as follows:

	Passenger Cars	Commercial Cars (Civilian only)
First quarter .....	293,333	45,500
Second quarter .....	345,100	45,417
Third quarter .....	186,173	45,429
*Fourth quarter ....	150,000	46,300
Total .....	974,606	182,646

\*Estimated.

In 1917 there were produced 1,718,000 passenger automobiles and 160,000 commercial motor vehicles, whereas under the war restrictions this year the total output of passenger cars will be slightly less than 1,000,000, or 740,000 fewer than in 1917. There was no enforced limitation of truck production until last August, except that many assemblers were unable to obtain deliveries of engines, transmissions and axles. Trucks produced and sold for civilian use only last year totalled 109,000, while this year they will reach 182,000—an increase of 67 per cent.

### Omaha Ford to Start Jan. 1

COLUMBUS, Dec. 9—Orders have been received at the Columbus assembling plant of the Ford Motor Co. to get into position to start work Jan. 1. The plant has been closed down for some time. It is expected that the plant will be put on 75 per cent capacity at the start.

### Canada Wants a Show

MONTREAL, Dec. 6—A straw vote taken during the past week shows two-thirds of the local automobile and accessory dealers strongly in favor of the annual automobile show being held in this city around the middle of February, 1919.

Many of the other one-third will not express an opinion until they have definite instructions from their factories, and it is a noteworthy fact that there are very few local dealers who openly state that they are entirely opposed to an automobile show this season.



## Coming Events

### Motor Shows

Dallas, Tex.	Dallas Automobile Trades Assn.	Dec. 12-14
Detroit, Mich.	Detroit Automobile Dealers' Assn. H. H. Stuart, Manager.	January
Milwaukee, Wis.	Eleventh Annual, Milwaukee Automobile Dealers, Inc., Auditorium. Bart J. Ruddle, Manager.	Jan. 24-30
Louisville, Ky.	Louisville Auto Dealers' Assn.	Feb. 15-22
Newark, N. J.	N. J. Auto Exhibition Co. Claude Holgate, Manager.	Feb. 15-22
Minneapolis, Minn.	Minneapolis Auto Trade Assn. Walter B. Wilmot, Manager.	Feb. 15-22
Minneapolis, Minn.	Northwestern Automotive Exposition, Overland Building.	Feb. 15-22
Des Moines, Ia.	Tenth Annual, Des Moines Automobile Dealers' Assn. C. G. Van Vleet, Manager.	Feb. 17-22
So. Bethlehem, Pa.	Lehigh Valley Auto Shows Co. J. L. Elliott, Manager.	Feb. 17-24
	Passenger cars	Feb. 17-24
	Trucks	Feb. 24-27
St. Louis, Mo.	St. Louis Auto Mfrs. and Dealers' Assn. Robert E. Lee, Manager.	Feb. 24-28
Grand Rapids, Mich.	Grand Rapids Automobile Business Assn. E. T. Conlon, Manager.	February
Philadelphia, Pa.	Philadelphia Automobile Trade Assn., A. E. Maltby, Manager.	March
	Passenger cars	March
	Motor Truck Assn.	March
	Trucks	Following week
Columbus, O.	Columbus Automobile Show Co., Memorial Building, W. W. Freeman, Manager.	Mar. 3-8
Buffalo, N. Y.	Buffalo Automobile Dealers' Assn.	Mar. 3-8
San Francisco, Cal.	Motor Car Dealers' Assn. G. A. Wahlgreen, Manager.	Mar. 1-10
Boston	Boston Automobile Dealers' Assn. Chester I. Campbell, Manager.	March
Brooklyn	Brooklyn Motor Vehicle Dealers' Assn. I. C. Kirkham, Manager.	March
	Passenger cars	Mar. 22-29
	Trucks	Apr. 1-5
Trenton, N. J.	Trenton Auto Trade Assn. John L. Brock, Manager.	3rd week March
New York	Automobile Dealers' Assn. Charles A. Stewart, Manager.	Probably February
Chicago	Chicago Automobile Trade Assn.	Probably March
Pittsburgh	Automobile Dealers' Assn. of Pittsburgh John J. Bell, Manager.	March
Great Falls, Mont.	Montana Automobile Dealers' Assn.	March
Syracuse, N. Y.	Syracuse Automobile Dealers' Assn. Harry T. Gardner, Manager.	March
Utica, N. Y.	Utica Motor Dealers' Assn. W. W. Garrabrant, Manager.	March
Harrisburg, Pa.	Harrisburg Motor Dealers' Assn. J. Clyde Myton, Manager.	March
Cleveland, O.	Cleveland Auto Show Co. Fred H. Caley, Manager.	Late March or early April
Montreal, Can.	Automobile and Used Car Exposition.	April 5-12
Bridgeport, Conn.	T. C. Kirby, Manager. Auspices of City Battalion.	Not Decided
Hartford, Conn.	B. B. Steiber, Manager. Hartford Automobile Dealers' Assn.	Not Decided
Kansas City, Mo.	Kansas City Motor Dealers' Assn. E. E. Peake, Manager.	Not Decided

### Tractor Shows

Kansas City, Mo.	Fourth Annual Tractor Show, Sweeney Bldg.	Feb. 10-15
Wichita, Kan.	Kansas City Tractor Club. Guy H. Hall, Sec. Annual Mid-west Tractor and Thresher Show. Wichita Tractor and Thresher Club. Forum.	Feb. 18-22

### Meetings

Chicago, Ill.	Twelfth Annual Meeting. American Society of Agricultural Engineers. J. W. Dickinson, Secy, Ohio State University, Columbus.	Dec. 30-Jan. 1
Chicago	Convention National Association of Automobile Accessory Jobbers. Directors and Committees	Dec. 16, 17, 18
	General Sessions	Dec. 16
New York	Meeting, Society Automotive Engineers.	Dec. 17-18
New York	Sixteenth Annual Convention. American Road Builders' Assn.	Jan. 12-14 Feb. 25-28

### Tractor Schools

#### Auspices New York State Food Commission

Barker	Dec. 9-13
Plattsburg	Dec. 16-20
Saratoga	Jan. 6-10
Newark	Jan. 6-10
Cattaraugus	Jan. 13-17
Trumansburg	Jan. 13-17
Poughkeepsie	Jan. 20-24

Syracuse	Jan. 20-24
Hornell	Jan. 27-31
Watertown	Jan. 21-31
Middletown	Feb. 3-7
Rochester	Feb. 3-7
Warsaw	Feb. 17-21
Penn Yan	Feb. 17-21
Binghamton	Feb. 24-28
Buffalo	Feb. 24-28
Batavia	Mar. 3-7
Canandaigua	Mar. 3-7
Oneonta	Mar. 10-14
Mt. Morris	Mar. 10-14

### Peoria Has Tractor Exhibit

PEORIA, ILL., Dec. 6—Optimism and large attendance and enthusiasm marked the nineteenth annual convention of the Illinois Vehicle and Implement Dealers' Association, held here Dec. 3, 4 and 5. All of the principal cities of the state were represented and the array of exhibits was greater than all former years, the display of trucks and tractors, and also power farming machinery of all kinds, being very complete and varied. The business sessions and conferences were held at the Jefferson Hotel. A question box was an instructive feature and produced much important discussion. There were also a number of talks by leading members. Adjournment was taken at 3 p. m. each day and the delegates proceeded to the Coliseum, where the exhibits were displayed.

### Scrap Metal Prices

NEW YORK, Dec. 5—Following are prices paid by New York dealers for scrap metals during the past week. All prices, which are from Iron Age, are nominal:

	Cents per lb.
Copper, heavy and crucible	22.00
Copper, heavy and wire	21.00
Copper, light and bottoms	18.00
Brass, heavy	12.00
Brass, light	10.00 to 10.50
Heavy machine composition	21.50 to 22.50
No. 1 yellow brass turnings	13.00 to 13.50
No. 1 red brass or composition turnings	18.00 to 18.50
Lead, heavy	6.75
Lead, tea	5.25
Zinc	5.50

### Willys-Overland Decreases Prices

DETROIT, Dec. 6—The Willys-Overland Co. has decreased the prices of all its models, excepting the No. 88 eight-cylinder passenger car. The new price list follows:

Model	New Price	Old Price
90 Touring	\$985	\$1,095
Willys-6 Touring	1,625	1,775
88-4	1,725	1,925
90 Sedan	1,495	1,665
88-4 Sedan	2,750	2,950
88-4 Coupe	2,650	2,850
90 Delivery	1,000	1,045

As the war tax is figured in the dealers' costs, the new schedule will mean a corresponding reduction in the tax.

### Avery Service Schools

Wichita, Kan.	Dec. 12-14
Omaha, Neb.	Dec. 16-18
Lincoln, Neb.	Dec. 19-21
Madison, Iowa	Jan. 9-11
Des Moines, Iowa	Jan. 13-15
Sioux Falls, S. D.	Jan. 16-18
Aberdeen, S. D.	Jan. 20-22
Minneapolis, Minn.	Jan. 23-25
Fargo, N. D.	Jan. 27-29
Grand Forks, N. D.	Jan. 30-Feb. 1
Billings, Mont.	Feb. 3-5
Peoria, Ill.	Feb. 13-15
Indianapolis, Ind.	Feb. 17-19
Columbus, Ohio	Feb. 20-22

### Case Service Schools

St. Louis-San Francisco	Dec. 10-14
Lincoln-Salt Lake City	Dec. 17-21
Minneapolis-Sioux Falls-Amarillo	Jan. 7-11
Des Moines-Watertown-Dallas	Jan. 14-17
Crowley	Jan. 21-24
Fargo-Harrisburg-Nashville	Jan. 28-31
Calgary-Syracuse-Louisville	Feb. 4-7
Edmonton-New York-Columbus	Feb. 11-14
Saskatoon-Boston-Indianapolis	Feb. 18-21
Regina-Lansing-Peoria	Feb. 25-28
Winnipeg-Madison-Chicago	Mar. 4-7
Oshkosh	Mar. 11-14

Farm  
Tractors

## MOTOR WORLD GUIDE

Farm  
Tractors

Trade Name	Rating	Weight	Price	Traction Type	No. of Wheels or Crawlers	Engine Make	Cylinder Number	Bore and Stroke	Fuel	Normal Flow Capacity
Acme.....	12-25	6,000	\$1800	W	2	Beaver	44x6	4 1/2 x 6	G or K	3
Acme.....	12-25	6,800	2250	W	2	Beaver	44x6	4 1/2 x 6	G or K	3
Allis-Chalmers.....	10-18	4,800	1250	W	4	Ow	25 1/2 x 7	4 1/2 x 7	G or K	2
Allis-Chalmers.....	14-20	5,000	1500	W	4	Ow	25 1/2 x 7	4 1/2 x 7	G or K	2
American.....	12-20	4,975	1585	W	3	Beaver	44x6	4 1/2 x 6	G or K	2-3
Andrews.....	12-20	5,250	1600	W	4	Buda	44x6	4 1/2 x 6	G or K	3
Appleton.....	12-20	4,900	1750	W	3	Waukesha	44x6	4 1/2 x 6	G or K	3
Atlas.....	15-30	7,800	2200	W	4	Waukesha	44x6	4 1/2 x 6	G or K	3
Aultman-Taylor.....	22-40	12,500	3500	W	4	Waukesha	44x6	4 1/2 x 6	G or K	6
Aultman-Taylor.....	30-40	23,000	5500	W	4	Waukesha	44x6	4 1/2 x 6	G or K	1
Austin.....	5-10	750	.....	W & C	2	LeRoi	44x6	4 1/2 x 6	G or K	1
Austin.....	12-20	3,500	.....	W & C	2	Buffalo	44x6	4 1/2 x 6	G or K	2-3
Austin.....	15-30	4,500	.....	W & C	4	Assoc. Mfrs.	44x6	4 1/2 x 6	G or K	3-4
Austin.....	20-40	.....	.....	W & C	4	Automatic	44x6	4 1/2 x 6	G or K	4-6
Auto Tiller.....	8-16	850	365	C	2	Buffalo	44x6	4 1/2 x 6	G or K	2
Avery.....	5-10	2,150	.....	W	2	Ow	15 x 7	4 1/2 x 6	G or K	2
Avery.....	8-16	4,900	.....	W	4	Ow	15 x 7	4 1/2 x 6	G or K	2
Avery.....	12-25	7,500	.....	W	4	Ow	25 1/2 x 7	4 1/2 x 7	G or K	3
Avery.....	12-25	9,250	.....	W	4	Ow	25 1/2 x 7	4 1/2 x 7	G or K	3
Avery.....	25-50	12,500	.....	W	4	Ow	40 1/2 x 8	4 1/2 x 8	G or K	10
Avery.....	40-80	22,000	.....	W	4	Ow	47 1/2 x 8	4 1/2 x 8	G or K	10
Bates Steel Mule.....	12-20	4,300	.....	C	2	Erd	44x6	4 1/2 x 6	G or K	3-4
Bean Track Pull.....	6-10	3,200	1445	W	1	LeRoi	13 1/2 x 4	13 1/2 x 4	G or D	2
Beeman.....	11-4	.....	285	W	1	Ow	13 1/2 x 4	13 1/2 x 4	G or D	2
Beltrill.....	12-20	4,500	4100	W & C	1	Waukesha	43x6	4 1/2 x 6	G or D	2
Best Tracklayer.....	38-75	28,000	5850	W & C	4	Ow	47 1/2 x 9	4 1/2 x 9	G or D	8
Blumberg.....	9-18	2,450	850	W	4	Ow	43x6	4 1/2 x 6	G or D	2
Blumberg.....	12-24	3,400	1485	W	3	Waukesha	44x6	4 1/2 x 6	G or K	3
Boring.....	15-30	6,900	.....	W	4	Waukesha	44x6	4 1/2 x 6	G or K	3
Boss.....	15-30	3,200	1585	W	4	Model	45x7	4 1/2 x 7	G or K	4
Boss.....	20-40	7,600	.....	W	4	Field	43x6	4 1/2 x 6	G or K	3
Brillion.....	12-22	4,900	.....	W	4	Automatic	47x9	4 1/2 x 9	G or K	3
Buckeye.....	16-30	21,000	5500	C	2	Automatic	47x9	4 1/2 x 9	G or K	3
Buckeye.....	24-45	25,000	6075	C	2	Automatic	47x9	4 1/2 x 9	G or K	3
Bull.....	12-24	5,000	1075	W	3	Toro	25 1/2 x 7	25 1/2 x 7	G or K	3
Case.....	10-18	3,400	1225	W	4	Ow	43x6	4 1/2 x 6	G or K	2
Case.....	10-20	5,000	1325	W	3	Ow	44x6	4 1/2 x 6	G or K	2
Case.....	15-27	5,600	1600	W	4	Ow	44x6	4 1/2 x 6	G or K	3
Case.....	20-40	13,700	3000	W	4	Ow	28x9	28x9	G or K	3
Case.....	30-60	25,800	3500	W	4	Ow	28x9	28x9	G or K	3
Cass.....	12-20	3,200	1585	W	4	Ow	43x6	4 1/2 x 6	G or K	3
Cass.....	12-20	3,200	1585	W	4	Ow	43x6	4 1/2 x 6	G or K	3
C.O.D.....	13-25	6,500	1395	W	4	Ow	45x7	4 1/2 x 7	G or K	3
Coleman.....	16-30	1750	.....	W	4	Climax	44x6	4 1/2 x 6	G or K	3
Creeping Grip.....	15-25	7,000	2000	W	2	Waukesha	44x6	4 1/2 x 6	G or K	3
Dill.....	20-.....	4,400	2840	W	4	Continental	44x6	4 1/2 x 6	G or K	3
E-B.....	9-16	4,260	.....	W	4	Ow	44x6	4 1/2 x 6	G or K	2
E-B.....	12-20	4,355	.....	W	4	Ow	44x6	4 1/2 x 6	G or K	2
E-B.....	12-20	6,500	.....	W	4	Ow	44x6	4 1/2 x 6	G or K	3
E-B.....	20-35	9,700	.....	W	4	Ow	45x7	4 1/2 x 7	G or K	5
E-B.....	40-65	23,000	.....	W	4	Ow	47 1/2 x 9	4 1/2 x 9	G or K	10
Elgin.....	9-18	2,900	\$1075	W	4	Buda	44x6	4 1/2 x 6	G or K	2
Elgin.....	12-25	3,500	1385	W	4	Erd	44x6	4 1/2 x 6	G or K	3
Fagel.....	6-12	3,000	1500	W	3	Overland	44x6	4 1/2 x 6	G or K	2
Farmer Boy.....	10-20	3,600	1350	W	3	Waukesha	44x6	4 1/2 x 6	G or K	2
Farquhar.....	15-25	6,000	.....	W	4	Buda	44x6	4 1/2 x 6	G or K	3
Farquhar.....	18-35	16,000	.....	W	4	Ow	46x8	4 1/2 x 8	G or K	5
Fitch.....	15-26	5,900	2500	W	4	Beaver	44x6	4 1/2 x 6	G or K	3
Fordson.....	12-20	2,700	.....	W	4	Erd	44x6	4 1/2 x 6	G or K	2
Frick.....	12-25	5,800	.....	W	3	Waukesha	44x6	4 1/2 x 6	G or K	2
Fulton.....	30-60	24,000	5000	W	4	Ow	48 x 10	48 x 10	G or K	10
Giant.....	50-75	20,000	5000	W	4	Waukesha	44x6	4 1/2 x 6	G or K	12
Gle.....	18-.....	7,000	.....	W	3	Ow	44x6	4 1/2 x 6	G or K	3-4
Gray.....	18-36	6,200	2250	Dr	3	Waukesha	44x6	4 1/2 x 6	G or K	3
Happy Farmer.....	12-24	3,800	1150	W	4	Ow	26 1/2 x 7	26 1/2 x 7	G or K	3
Har-Parr.....	15-31	5,300	1395	W	4	Ow	26 1/2 x 7	26 1/2 x 7	G or K	3
Heider.....	9-16	4,000	.....	W	4	Waukesha	44x6	4 1/2 x 6	G or K	2
Hession.....	12-20	2,000	1675	W	4	Waukesha	44x6	4 1/2 x 6	G or K	3
Hess.....	13-25	4,200	1375	W	4	Light	44x6	4 1/2 x 6	G or K	3
Holt.....	15-25	4,130	.....	W	2	Ow	46x7	46x7	G or K	3
Holt.....	40-75	25,000	.....	C	2	Ow	67x8	67x8	G or D	10
Holt.....	70-.....	26,500	.....	C	2	Ow	67x8	67x8	G or D	10
Huber.....	12-25	5,000	.....	W	4	Waukesha	44x6	4 1/2 x 6	G or K	3
Imperial.....	40-70	20,800	4500	W	4	Ow	47x9	47x9	G or K	12
Indiana.....	5-10	1,700	900	W	2	LeRoi	44x6	4 1/2 x 6	G or K	1
International.....	15-30	9,000	.....	W	4	Ow	44x6	4 1/2 x 6	G or K	3
Junior.....	12-24	6,200	.....	W	4	Waukesha	44x6	4 1/2 x 6	G or K	3
Kardell.....	18-35	4,800	.....	W	3	Waukesha	44x6	4 1/2 x 6	G or K	3
K'n-Gonnerman.....	12-24	6,500	1500	W	4	Ow	26 1/2 x 7	26 1/2 x 7	G or K	3
LaCrosse.....	12-24	3,800	1150	W	4	Ow	26 1/2 x 7	26 1/2 x 7	G or K	3
Lauson.....	15-25	6,000	1985	W	3	Beaver	44x6	4 1/2 x 6	G or K	3
Leader.....	12-18	4,800	1000	W & C	3	Ow	26 1/2 x 7	26 1/2 x 7	G or K	3
Leader.....	18-36	6,600	2250	W & C	4	Twin City	44x6	4 1/2 x 6	G or K	4
Leonard.....	20-30	5,900	2000	W	4	Buda	44x6	4 1/2 x 6	G or K	4
Lenox.....	60-.....	12,500	.....	W	4	Ow	60x8	60x8	G or K	10
Lenox.....	60-.....	12,500	.....	W	4	Ow	60x8	60x8	G or K	10
Lightfoot.....	6-10	3,200	1200	W	2	Karmath	44x6	4 1/2 x 6	G or K	3
Little Giant.....	16-22	5,200	1650	W	4	Ow	44x6	4 1/2 x 6	G or K	3
Little Giant.....	26-35	8,700	2500	W	4	Ow	44x6	4 1/2 x 6	G or K	3
Lombard.....	100-.....	18,000	.....	C	2	Ow	60x8	60x8	G or K	10
Minneapolis.....	15-.....	6,600	.....	W	4	Ow	44x6	4 1/2 x 6	G or K	3
Minneapolis.....	20-.....	22,500	.....	W	4	Ow	44x6	4 1/2 x 6	G or K	3
Minneapolis.....	10-20	5,500	1125	W	4	Ow	44x6	4 1/2 x 6	G or K	3
Mogul.....	10-20	5,500	1125	W	4	Ow	44x6	4 1/2 x 6	G or K	3
Moline Univ.....	9-18	3,300	1385	W	2	Ow	44x6	4 1/2 x 6	G or K	2

ABBREVIATIONS—"W" Wheel, "C" Crawler, "Dr" Drum, "G" Gasoline, "K" Kerosene, "D" Distillate. Flow capacity varies in relation to operating conditions. Figures are based on 14 in. plow.

# MOTOR WORLD GUIDE

Trucks

Trucks

TIRES				TIRES				TIRES				TIRES			
Cylinder Bore				Cylinder Bore				Cylinder Bore				Cylinder Bore			
F. R.				F. R.				F. R.				F. R.			
Name and Model				Name and Model				Name and Model				Name and Model			
Tons Capacity				Tons Capacity				Tons Capacity				Tons Capacity			
Chassis Price				Chassis Price				Chassis Price				Chassis Price			
Cylinder Bore				Cylinder Bore				Cylinder Bore				Cylinder Bore			
F. R.				F. R.				F. R.				F. R.			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			
A & B.....				A & B.....				A & B.....				A & B.....			

Name and Model	Tons Capacity	Price	Cylinder Bore and Stroke	TIRES F. R.
Studebaker	7	\$1400	4-3 1/2	35x5 35x5
Sullivan	F 1 1/2	2350	4-3 1/2	36x5 36x5
Sullivan	E 2	3150	4-3 1/2	36x5 36x5
Superior	A 1	1600	4-3 1/2	34x4 34x4
Superior	C 2	2200	4-3 1/2	36x4 36x4
Tiffin	A 1	1100	4-3 1/2	35x4 35x4
Tiffin	GW 1 1/2	2075	4-3 1/2	36x5 36x5
Tiffin	MW 2 1/2	2750	4-3 1/2	36x5 36x5
Tiffin	PW 3 1/2	3600	4-3 1/2	36x5 36x5
Tiffin	RW 6	4650	6-3 1/2	36x5 36x5
Tiffin	SW 6	4850	6-3 1/2	36x5 36x5
Titan	...	34	4300	4-1 1/2 36x5 40x6
Titan	...	5	5150	4-1 1/2 36x5 40x6
Traffic	...	2	1305	4-3 1/2 34x3 34x3
Triangle	...	1 1/2	2185	4-3 1/2 34x3 34x3
Triangle	...	2	2850	4-3 1/2 36x4 36x4
United	AX 1 1/2	...	4-3 1/2	34x3 34x3
United	AX 2 1/2	...	4-3 1/2	36x4 36x4
United	AX 3 1/2	...	4-3 1/2	36x5 36x5
United	AX 4 1/2	...	4-3 1/2	36x6 36x6
United	AX 5 1/2	...	4-3 1/2	36x7 36x7
U.S.	...	6	4-1 1/2	34x3 34x3
U.S.	...	2800	4-1 1/2	34x4 34x4
U.S.	...	3250	4-1 1/2	36x4 36x4
U.S.	...	3500	4-1 1/2	36x5 36x5
U.S.	...	3850	4-1 1/2	36x6 36x6
U.S.	...	4850	4-1 1/2	36x5 36x5
Universal	...	2	4-3 1/2	34x3 34x3
Universal	...	2	4-3 1/2	36x4 36x4
Universal	...	3	4-3 1/2	36x5 36x5
Velia	...	2850	4-1 1/2	36x4 36x4
Velia	...	3900	4-1 1/2	36x5 36x5
Vim	...	945	4-3 1/2	31x4 31x4
Vim	...	2105	4-3 1/2	34x4 34x4
Vim	...	2465	4-3 1/2	36x4 36x4
Vim	...	4345	4-1 1/2	36x4 36x4
Walton	...	5	4-1 1/2	40x6 40x6
Walton	...	4050	4-1 1/2	34x4 34x4
White	...	2300	4-3 1/2	34x4 34x4
White	...	3300	4-3 1/2	36x3 36x3
White	...	5	4-1 1/2	36x5 36x5
White	...	5000	4-1 1/2	36x6 36x6
White	...	5000	4-1 1/2	36x7 36x7
White	...	4600	4-1 1/2	36x5 36x5
White	...	4600	4-1 1/2	36x6 36x6
White	...	2100	4-3 1/2	35x5 35x5
White	...	2275	4-1 1/2	36x4 36x4
White	...	3350	4-1 1/2	36x5 36x5
White	...	3350	4-1 1/2	36x6 36x6
White	...	5000	4-1 1/2	36x5 36x5
Wilson	...	1	1830	4-3 1/2 35x5 35x5
Wilson	...	2	2800	4-1 1/2 36x4 36x4
Wilson	...	3	3800	4-1 1/2 36x5 36x5
Wilson	...	4	4850	4-1 1/2 36x6 36x6
Wilson	...	5	5900	4-1 1/2 36x7 36x7
Wilson	...	6	6950	4-1 1/2 36x8 36x8
Wilson	...	7	7950	4-1 1/2 36x9 36x9
Wilson	...	8	8950	4-1 1/2 36x10 36x10
Wilson	...	9	9950	4-1 1/2 36x11 36x11
Wilson	...	10	10950	4-1 1/2 36x12 36x12
Wilson	...	11	11950	4-1 1/2 36x13 36x13
Wilson	...	12	12950	4-1 1/2 36x14 36x14
Wilson	...	13	13950	4-1 1/2 36x15 36x15
Wilson	...	14	14950	4-1 1/2 36x16 36x16
Wilson	...	15	15950	4-1 1/2 36x17 36x17
Wilson	...	16	16950	4-1 1/2 36x18 36x18
Wilson	...	17	17950	4-1 1/2 36x19 36x19
Wilson	...	18	18950	4-1 1/2 36x20 36x20
Wilson	...	19	19950	4-1 1/2 36x21 36x21
Wilson	...	20	20950	4-1 1/2 36x22 36x22
Wilson	...	21	21950	4-1 1/2 36x23 36x23
Wilson	...	22	22950	4-1 1/2 36x24 36x24
Wilson	...	23	23950	4-1 1/2 36x25 36x25
Wilson	...	24	24950	4-1 1/2 36x26 36x26
Wilson	...	25	25950	4-1 1/2 36x27 36x27
Wilson	...	26	26950	4-1 1/2 36x28 36x28
Wilson	...	27	27950	4-1 1/2 36x29 36x29
Wilson	...	28	28950	4-1 1/2 36x30 36x30
Wilson	...	29	29950	4-1 1/2 36x31 36x31
Wilson	...	30	30950	4-1 1/2 36x32 36x32
Wilson	...	31	31950	4-1 1/2 36x33 36x33
Wilson	...	32	32950	4-1 1/2 36x34 36x34
Wilson	...	33	33950	4-1 1/2 36x35 36x35
Wilson	...	34	34950	4-1 1/2 36x36 36x36
Wilson	...	35	35950	4-1 1/2 36x37 36x37
Wilson	...	36	36950	4-1 1/2 36x38 36x38
Wilson	...	37	37950	4-1 1/2 36x39 36x39
Wilson	...	38	38950	4-1 1/2 36x40 36x40
Wilson	...	39	39950	4-1 1/2 36x41 36x41
Wilson	...	40	40950	4-1 1/2 36x42 36x42
Wilson	...	41	41950	4-1 1/2 36x43 36x43
Wilson	...	42	42950	4-1 1/2 36x44 36x44
Wilson	...	43	43950	4-1 1/2 36x45 36x45
Wilson	...	44	44950	4-1 1/2 36x46 36x46
Wilson	...	45	45950	4-1 1/2 36x47 36x47
Wilson	...	46	46950	4-1 1/2 36x48 36x48
Wilson	...	47	47950	4-1 1/2 36x49 36x49
Wilson	...	48	48950	4-1 1/2 36x50 36x50
Wilson	...	49	49950	4-1 1/2 36x51 36x51
Wilson	...	50	50950	4-1 1/2 36x52 36x52
Wilson	...	51	51950	4-1 1/2 36x53 36x53
Wilson	...	52	52950	4-1 1/2 36x54 36x54
Wilson	...	53	53950	4-1 1/2 36x55 36x55
Wilson	...	54	54950	4-1 1/2 36x56 36x56
Wilson	...	55	55950	4-1 1/2 36x57 36x57
Wilson	...	56	56950	4-1 1/2 36x58 36x58
Wilson	...	57	57950	4-1 1/2 36x59 36x59
Wilson	...	58	58950	4-1 1/2 36x60 36x60
Wilson	...	59	59950	4-1 1/2 36x61 36x61
Wilson	...	60	60950	4-1 1/2 36x62 36x62
Wilson	...	61	61950	4-1 1/2 36x63 36x63
Wilson	...	62	62950	4-1 1/2 36x64 36x64
Wilson	...	63	63950	4-1 1/2 36x65 36x65
Wilson	...	64	64950	4-1 1/2 36x66 36x66
Wilson	...	65	65950	4-1 1/2 36x67 36x67
Wilson	...	66	66950	4-1 1/2 36x68 36x68
Wilson	...	67	67950	4-1 1/2 36x69 36x69
Wilson	...	68	68950	4-1 1/2 36x70 36x70
Wilson	...	69	69950	4-1 1/2 36x71 36x71
Wilson	...	70	70950	4-1 1/2 36x72 36x72
Wilson	...	71	71950	4-1 1/2 36x73 36x73
Wilson	...	72	72950	4-1 1/2 36x74 36x74
Wilson	...	73	73950	4-1 1/2 36x75 36x75
Wilson	...	74	74950	4-1 1/2 36x76 36x76
Wilson	...	75	75950	4-1 1/2 36x77 36x77
Wilson	...	76	76950	4-1 1/2 36x78 36x78
Wilson	...	77	77950	4-1 1/2 36x79 36x79
Wilson	...	78	78950	4-1 1/2 36x80 36x80
Wilson	...	79	79950	4-1 1/2 36x81 36x81
Wilson	...	80	80950	4-1 1/2 36x82 36x82
Wilson	...	81	81950	4-1 1/2 36x83 36x83
Wilson	...	82	82950	4-1 1/2 36x84 36x84
Wilson	...	83	83950	4-1 1/2 36x85 36x85
Wilson	...	84	84950	4-1 1/2 36x86 36x86
Wilson	...	85	85950	4-1 1/2 36x87 36x87
Wilson	...	86	86950	4-1 1/2 36x88 36x88
Wilson	...	87	87950	4-1 1/2 36x89 36x89
Wilson	...	88	88950	4-1 1/2 36x90 36x90
Wilson	...	89	89950	4-1 1/2 36x91 36x91
Wilson	...	90	90950	4-1 1/2 36x92 36x92
Wilson	...	91	91950	4-1 1/2 36x93 36x93
Wilson	...	92	92950	4-1 1/2 36x94 36x94
Wilson	...	93	93950	4-1 1/2 36x95 36x95
Wilson	...	94	94950	4-1 1/2 36x96 36x96
Wilson	...	95	95950	4-1 1/2 36x97 36x97
Wilson	...	96	96950	4-1 1/2 36x98 36x98
Wilson	...	97	97950	4-1 1/2 36x99 36x99
Wilson	...	98	98950	4-1 1/2 36x100 36x100
Wilson	...	99	99950	4-1 1/2 36x101 36x101
Wilson	...	100	100950	4-1 1/2 36x102 36x102

Name and Model	Tons Capacity	Price	Cylinder Bore and Stroke	TIRES F. R.
Schacht	2 1/2	\$3500	4-1 1/2	36x4 36x4
Schacht	3	4950	4-1 1/2	36x5 36x5
Schacht	4	5950	4-1 1/2	36x6 36x6
Schacht	5	6950	4-1 1/2	36x7 36x7
Schacht	6	7950	4-1 1/2	36x8 36x8
Schacht	7	8950	4-1 1/2	36x9 36x9
Schacht	8	9950	4-1 1/2	36x10 36x10
Schacht	9	10950	4-1 1/2	36x11 36x11
Schacht	10	11950	4-1 1/2	36x12 36x12
Schacht	11	12950	4-1 1/2	36x13 36x13
Schacht	12	13950	4-1 1/2	36x14 36x14
Schacht	13	14950	4-1 1/2	36x15 36x15
Schacht	14	15950	4-1 1/2	36x16 36x16
Schacht	15	16950	4-1 1/2	36x17 36x17
Schacht	16	17950	4-1 1/2	36x18 36x18
Schacht	17	18950	4-1 1/2	36x19 36x19
Schacht	18	19950	4-1 1/2	36x20 36x20
Schacht	19	20950	4-1 1/2	36x21 36x21
Schacht	20	21950	4-1 1/2	36x22 36x22
Schacht	21	22950	4-1 1/2	36x23 36x23
Schacht	22	23950	4-1 1/2	36x24 36x24
Schacht	23	24950	4-1 1/2	36x25 36x25
Schacht	24	25950	4-1 1/2	36x26 36x26
Schacht	25	26950	4-1 1/2	36x27 36x27
Schacht	26	27950	4-1 1/2	36x28 36x28
Schacht	27	28950	4-1 1/2	36x29 36x29
Schacht	28	29950	4-1 1/2	36x30 36x30
Schacht	29	30950	4-1 1/2	36x31 36x31
Schacht	30	31950	4-1 1/2	36x32 36x32
Schacht	31	32950	4-1 1/2	36x33 36x33
Schacht	32	33950	4-1 1/2	36x34 36x34
Schacht	33	34950	4-1 1/2	36x35 36x35
Schacht	34	35950	4-1 1/2	36x36 36x36
Schacht	35	36950	4-1 1/2	36x37 36x37
Schacht	36	37950	4-1 1/2	36x38 36x38
Schacht	37	38950	4-1 1/2	36x39 36x39
Schacht	38	39950	4-1 1/2	36x40 36x40
Schacht	39	40950	4-1 1/2	36x41 36x41
Schacht	40	41950	4-1 1/2	36x42 36x42
Schacht	41	42950	4-1 1/2	36x43 36x43
Schacht	42	43950	4-1 1/2	36x44 36x44
Schacht	43	44950	4-1 1/2	36x45 36x45
Schacht	44	45950	4-1 1/2	36x46 36x46
Schacht	45	46950	4-1 1/2	36x47 36x47
Schacht	46	47950	4-1 1/2	36x48 36x48
Schacht	47	48950	4-1 1/2	36x49 36x49
Schacht	48	49950	4-1 1/2	36x50 36x50
Schacht	49	50950	4-1 1/2	36x51 36x51
Schacht	50	51950	4-1 1/2	36x52 36x52
Schacht	51	52950	4-1 1/2	36x53 36x53
Schacht	52	53950	4-1 1/2	36x54 36x54
Schacht	53	54950	4-1 1/2	36x55 36x55
Schacht	54	55950	4-1 1/2	36x56 36x56
Schacht	55	56950	4-1 1/2	36x57 36x57
Schacht	56	57950	4-1 1/2	36x58 36x58
Schacht	57	58950	4-1 1/2	36x59 36x59
Schacht	58	59950	4-1 1/2	36x60 36x60
Schacht	59	60950	4-1 1/2	36x61 36x61
Schacht	60	61950	4-1 1/2	36x62 36x62
Schacht	61	62950	4-1 1/2	36x63 36x63
Schacht	62	63950	4-1 1/2	36x64 36x64
Schacht	63	64950	4-1 1/2	36x65 36x65
Schacht	64	65950	4-1 1/2	36x66 36x66
Schacht	65	66950	4-1 1/2	36x67 36x6

## Passenger Cars

## MOTOR WORLD GUIDE

## Passenger Cars

Model	Motor	Ignition	Starting Lighting	WB	Tires	Price	2- Pass.	6- Pass.	7- Pass.
ALLEN Series 41	4-3125	Conn	A-Lite	112 32x3 88	1115	1195	1195	1195	1195
AMERICAN B	4-3125	A-Kent	West	123 32x4 88	1835	1765	1865	1865	1865
ANDERSON	4-3124	Conn	Wells	120 32x4 88	1245	1675	1750	1750	1750
400-F	4-3125	Boesh	Wells	120 32x4 88	1245	1675	1750	1750	1750
APPERSON	4-3125	Remy	Bijur	120 32x4 88	12800	12800	12800	12800	12800
8-18	4-3125	Remy	Bijur	120 32x4 88	12800	12800	12800	12800	12800
AUBURN	6-3124	Remy	Wells	120 32x4 88	1895	1895	1895	1895	1895
6-30-B	6-3124	Delco	Wells	120 32x4 88	1755	1755	1755	1755	1755
6-44	4-3124	A-Kent	Dyneto	114 31x4 QD	1145	1145	1145	1145	1145
BELL	4-3124	Emman	G & D	121 32x4 QD	2700	2700	2700	2700	2700
BIDDLE	4-3124	Conn	A-Lite	104 30x3 C	885	885	885	885	885
BRISCOE	4-3124	Delco	Wells	118 32x4 88	1595	1595	1595	1595	1595
BUCK	4-3124	Delco	Wells	124 32x4 88	1865	1865	1865	1865	1865
H-45	4-3124	Delco	Wells	124 32x4 88	1865	1865	1865	1865	1865
H-49	4-3124	Delco	Wells	124 32x4 88	1865	1865	1865	1865	1865
CADILLAC	6-3125	Delco	Wells	125 32x5 88	2220	2220	2220	2220	2220
57	6-3125	Delco	Wells	125 32x5 88	2220	2220	2220	2220	2220
CASE	6-3125	Wells	Wells	125 32x5 88	12100	2100	2100	2100	2100
U	6-3125	Wells	Wells	125 32x5 88	1565	1565	1565	1565	1565
CHALMERS	6-3124	Remy	Wells	117 32x4 88	1015	1015	1015	1015	1015
6-30	6-3124	Remy	Wells	117 32x4 88	1015	1015	1015	1015	1015
CHANDLER	6-3125	Boesh	Wells	123 32x4 88	12095	2175	2095	2095	2095
CHEVROLET	4-3124	Remy	A-Lite	102 30x3 C	715	725	725	725	725
490	4-3124	Remy	A-Lite	102 30x3 C	715	725	725	725	725
FA	4-3124	Remy	A-Lite	102 30x3 C	715	725	725	725	725
D	4-3124	Remy	A-Lite	102 30x3 C	715	725	725	725	725
COLE	6-3124	Delco	Wells	127 32x5 88	2595	2595	2595	2595	2595
870	6-3124	Delco	Wells	127 32x5 88	2595	2595	2595	2595	2595
COLUMBIA	6-3124	A-Kent	W-Land	115 32x4	11595	1550	1550	1550	1550
Cad	6-3124	A-Kent	W-Land	115 32x4	11595	1550	1550	1550	1550
CROW-ELKHART	4-3125	Conn	Dyneto	114 32x3 88	1095	1155	1095	1095	1095
CE-36	4-3125	Conn	Dyneto	114 32x3 88	1095	1155	1095	1095	1095
DANIELS	6-3125	Wells	Wells	127 32x5 88	3750	3750	3750	3750	3750
DAVIS	6-3124	Delco	Wells	119 32x4 88	1685	1685	1685	1685	1685
H-1	6-3124	Delco	Wells	124 32x4 88	2050	2050	2050	2050	2050
J-1	6-3124	Delco	Wells	124 32x4 88	2050	2050	2050	2050	2050
DIXIE FLYER	4-3125	Conn	Dyneto	112 32x3 88	1095	1095	1095	1095	1095
L835	4-3124	Own	N.E.	114 32x3 88	1085	1085	1085	1085	1085
DODGE BROTHERS	6-4 25	Boesh	Wells	123 32x5 88	1985	1985	1985	1985	1985
DORRIS	6-4 25	Boesh	Wells	123 32x5 88	1985	1985	1985	1985	1985
6-30	4-3125	Conn	Wells	106 30x3 QD	1175	1175	1175	1175	1175
DORT	4-3125	Conn	Wells	116 32x4 88	1375	1375	1375	1375	1375
ELCAR	4-3125	A-Kent	Dyneto	116 32x4 88	1375	1375	1375	1375	1375
D.F.	4-3124	A-Kent	Dyneto	116 32x4 88	1375	1375	1375	1375	1375
ELGIN	6-3124	Wagner	Wells	118 32x4 88	1995	1995	1995	1995	1995
H	6-3124	Wagner	Wells	118 32x4 88	1995	1995	1995	1995	1995
EMPIRE	4-3125	Conn	A-Lite	115 32x4 88	1165	1125	1125	1125	1125
50-51	4-3125	Conn	A-Lite	115 32x4 88	1165	1125	1125	1125	1125
72	4-3125	Conn	A-Lite	115 32x4 88	1165	1125	1125	1125	1125
73	4-3125	Conn	A-Lite	115 32x4 88	1165	1125	1125	1125	1125
ESSEX	4-3125	Delco	Wells	106 32x4	1395	1395	1395	1395	1395
A	4-3124	Own	Wells	100 30x3 C	500	525	525	525	525
FORD	4-3124	Own	Wells	100 30x3 C	500	525	525	525	525
T	4-3124	Own	Wells	100 30x3 C	500	525	525	525	525
FRANKLIN	6-3124	A-Kent	Dyneto	115 32x4 88	2400	2450	2450	2450	2450
9	6-3124	A-Kent	Dyneto	115 32x4 88	2400	2450	2450	2450	2450

ABBREVIATIONS — "A. Kent" Altravert Kent, "A-Lite" Auto-Lite, "Conn" Connecticut, "G & D" Gray & Davis, "Emman" Emman, "L-N" Leese-Neville, "B. E." North East, "Wells" Westinghouse, "W. Land" Ward Leonard, "SS" Snelight, "QD" Quiet Detachable, "G" Otis, "QDR" Quiet Detachable Rear-wheel, "NOTE" — 30x3 means that the rear tire is 30x3 and the front are smaller.



HORSELESS AGE

The oldest automotive paper published in the English language has been purchased by The Class Journal Co. Its merchandising features, and a part of its circulation, have been merged with

MOTOR WORLD

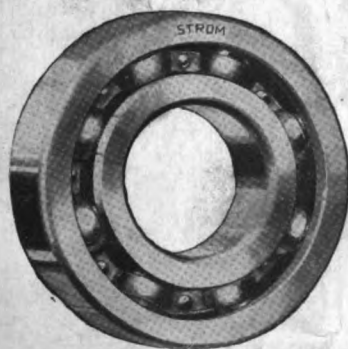
# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Volume LVII  
Number 12

PUBLISHED WEEKLY AT 239 WEST 39th STREET  
NEW YORK, DECEMBER 18, 1918

Fifteen cents a copy  
Two dollars a year



U. S. BALL BEARING MFG. CO. (Conrad Patent Licensee) CHICAGO, ILL., U. S. A.

## Tractor Means Traction

There are just two main functions a tractor driving mechanism must perform. One is *cling* to the ground *all* the time and the other is to *not pack* the ground *any* of the time.

The crawler is the only type drive that performs both of these functions correctly.

Because it is a crawler type tractor with many years of crawler building experience behind it, the BATES STEEL MULE is always the first choice of a farmer who buys his second tractor. Over 80% of our customers are those who once owned some type of wheel machine.

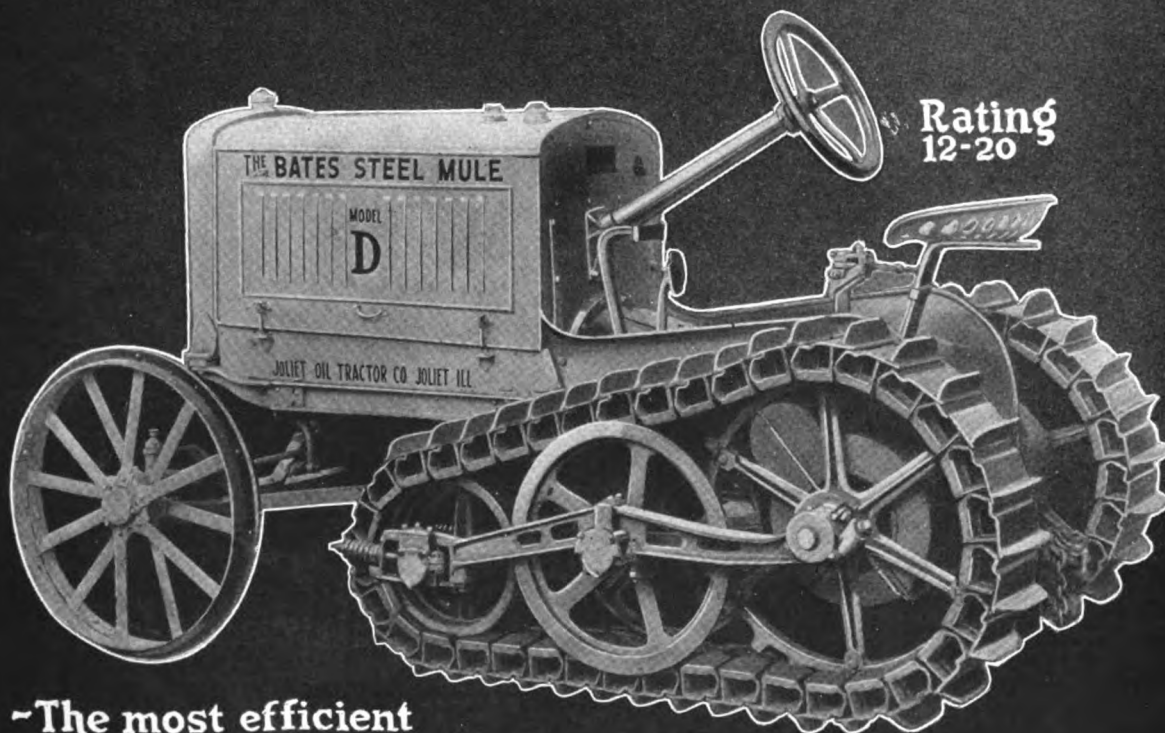
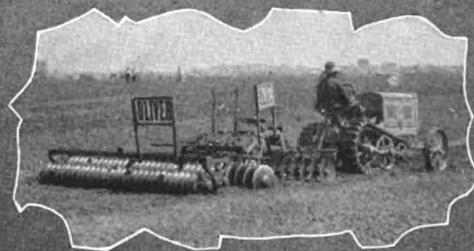
The BATES STEEL MULE may cost more than the average tractor in first price, but the *upkeep* is low and makes it by far the cheapest tractor to operate.

Enclosed unit type construction; Timken roller bearings; rugged four cylinder kerosene motor; and well made crawlers; easily put the BATES STEEL MULE beyond competition from a service standpoint.

*While we are able to add only a few new dealers for the big Spring demand, it may be you can be one of them if you get in touch with us soon enough. Better write today.*

**JOLIET OIL TRACTOR CO.**

462 Jackson Street, Joliet, Illinois



Rating  
12-20

~The most efficient  
tractor in America~



# Looking ahead to 1919

1919

Makes Every Road  
a Boulevard



## The Equipment Which Looms Big

Considerations of efficiency and economy unquestionably will govern the selection of automobile equipment for the season of 1919 as they have throughout 1918.

Governmental curtailment of motor car production, but recently modified, limits the quantity of new cars which will be immediately available. The desire to conserve new cars as well as to better the service of last and previous-year models, must continue to be strong. The

# ★Hartford

## SHOCK ABSORBER

### THE ESSENTIAL EQUIPMENT

with its demonstrated ability to offset road shocks and strains; to decrease tire wear and fuel consumption; to save springs from breakage, mechanism in general from needlessly rapid deterioration, passengers from bodily discomfort and travel fatigue, will continue to occupy its dominant position in the automobile equipment field.

Already its use has brought the realization of better service and greater economy to nearly half a million users and 1919 will see this great army further materially augmented.

Put a set of Hartfords on your car. Our famous guarantee safeguards your purchase; it is—Satisfaction or Money Back.

The Economy of Prevention  
One collision may prove  
far more costly than the  
price of a

**Hartford**  
**BUMP ABSORBER**  
—more than a Bumper

which parries the blow from  
your car and absorbs the  
force of it, saving damage  
and strain. A staunch,  
flexible car guard.  
Prices: \$14, \$12—Ford \$9.50

Send for and read "Every Phase of Motoring," Free

Prices—5 Sizes: \$60, \$50, \$40, \$30; Ford, \$22.50

**Edward V. Hartford, Inc.,** 142 Morgan Street  
Jersey City, N. J.

Makers of the famous Hartford Auto Jack and Hartford Bump Absorber

BRANCHES: New York Boston Chicago Kansas City

Distributors in Principal Cities

Dealers Everywhere

The Jack Extraordinary  
Matchless in ease of ac-  
tion. Strong, stable, sure-  
acting. The

**Hartford**  
**AUTO JACK**

settles the question of jack  
purchases through the lives  
of at least two cars. A gilt-  
edge investment in quality  
service.  
Price \$8

SINCE 1899  
**POLACK**  
TRUCK TIRES  
WORLD'S STANDARD

## A 1919 Message To Dealers

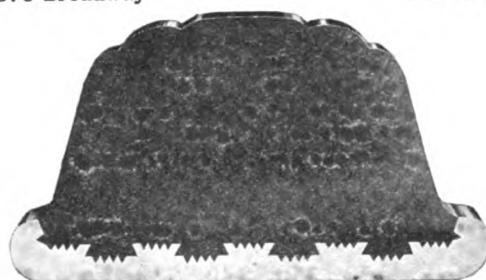
When the nation's energy in the period of reconstruction has been fully swung back into the gigantic industrial expansion of peace ahead in the new struggle for commercial supremacy, only action—action at high speed—will keep us in the ranks of the fast procession. The time for “thinking it over” will be past.

Be ready.

Arrange now for the sale of Polack truck tire in your territory. With a whole nation moving swiftly on motor truck transportation, your opportunity and your need for increased prestige is in an old-established truck tire like the Polack.

Write us now for full details.

**POLACK TYRE & RUBBER CO.**  
1876 Broadway New York



**STABILITY  
ENDURES**

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

231-241 W. 39th St., New York City. 'Phone, Bryant 8700  
PUBLISHED EVERY WEDNESDAY BY

## The Class Journal Co.

U. P. C. Building, 231-241 West 39th Street, New York City  
Horace M. Swetland, President  
W. I. Ralph, Vice-President E. M. Corey, Treasurer  
A. B. Swetland, General Manager

**Business Department**  
Charles B. Shanks, Manager

**Editorial Department**  
David Beecroft, Directing Editor  
Ray W. Sherman, Editor  
Stanley P. McMinn, Managing Editor  
J. Howard Pile

### Branch Offices

Chicago—Mallers Bldg., 59 East Madison St., 'Phone Randolph 6900  
Detroit—95 Fort Street, West, 'Phone Main 1251  
Cleveland—Guardian Bldg., 'Phone Main 1142

Subscription, Per Annum (Postage Paid).....\$2.00  
Foreign and Canadian Subscriptions.....4.00  
Single Copies (Postage Paid).....15 Cents

### Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to MOTOR WORLD.

Cable Address, "MOTORWORLD," New York  
Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

Owned by United Publishers Corporation, 239 West 39th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. C. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
Copyright, 1918, by The Class Journal Co.

## Editorial Contents

American Red Cross Christmas Roll Call .....	8
Federal Highways Commission Wanted .....	9
The Great Discovery .....	11
Tractors and Trailers Supplant Horse .....	13
Farm Light Is an Opportunity .....	15
Back to Business .....	16
Cars Helped When South Africa Had the "Flu" .....	18
The Law .....	19
Winter Business .....	20
Reilly Story .....	22
Better Mechanics .....	23
What War Means to the Service Station .....	25
Repairshop Shortcuts .....	26
Editorials .....	28
Letters from Readers .....	29
Automotive Equipment .....	31
Retail News .....	32
N. A. D. A. News .....	33
Makes New Cars Out of Old Ones .....	34
Regular News Department .....	36
<b>Specifications</b>	
Tractors .....	45
Trucks .....	46
Cars .....	48
Calendar .....	44

Advertisers' Index on Pages 122-123

# "NORMA" PRECISION BALL BEARINGS

(PATENTED)



A machine, a mechanism, reflects the character of its builder. From the performance of that machine or mechanism the user forms his estimate of the standards, the integrity, of the manufacturer. Inadequacy in some seemingly minor part evidences carelessness and neglect and calls in question not only the worth of the machine but also the character of the man who made it.

Manufacturers of ignition apparatus and lighting generators using "NORMA" Ball Bearings fear no bearing troubles or failures. And builders of cars, trucks, tractors, power boats and airplanes carrying this high-grade apparatus fear no criticism due to trouble with their electrical equipment.

*Be SURE—See That Your Electrical Accessories Are "NORMA" Equipped*

**THE NORMA COMPANY OF AMERICA**

1790 BROADWAY

NEW YORK

*Ball, Roller, Thrust and Combination Bearings*





# ALLIS-CHALMERS

## GENERAL PURPOSE FARM TRACTOR

\$850.00 f. o. b. Milwaukee, Wis.

**D**ESIGNED and built by one of the world's greatest manufacturers of high grade machinery, in answer to the country-wide demand for a thoroughly reliable general purpose tractor, at a price every farmer can afford to pay.

### The Machine Every Farmer is Looking For

The dealer who handles this latest achievement in tractor construction will have the machine the farmers *want*. And he will have the selling advantage of Allis-Chalmers' reputation and prestige, their financial solidity, their unrivalled resources and facilities for service.

The machine weighs only 1850 pounds, yet is rated at 6 H. P. on the drawbar and 12 H. P. on the belt. With it the farmer can use practically any implement of standard make; can do his cultivating, corn planting, discing, dragging; pull his corn binder, grain binder, mower, manure spreader, plow and other implements.

### Will Establish You in the Tractor Business Right

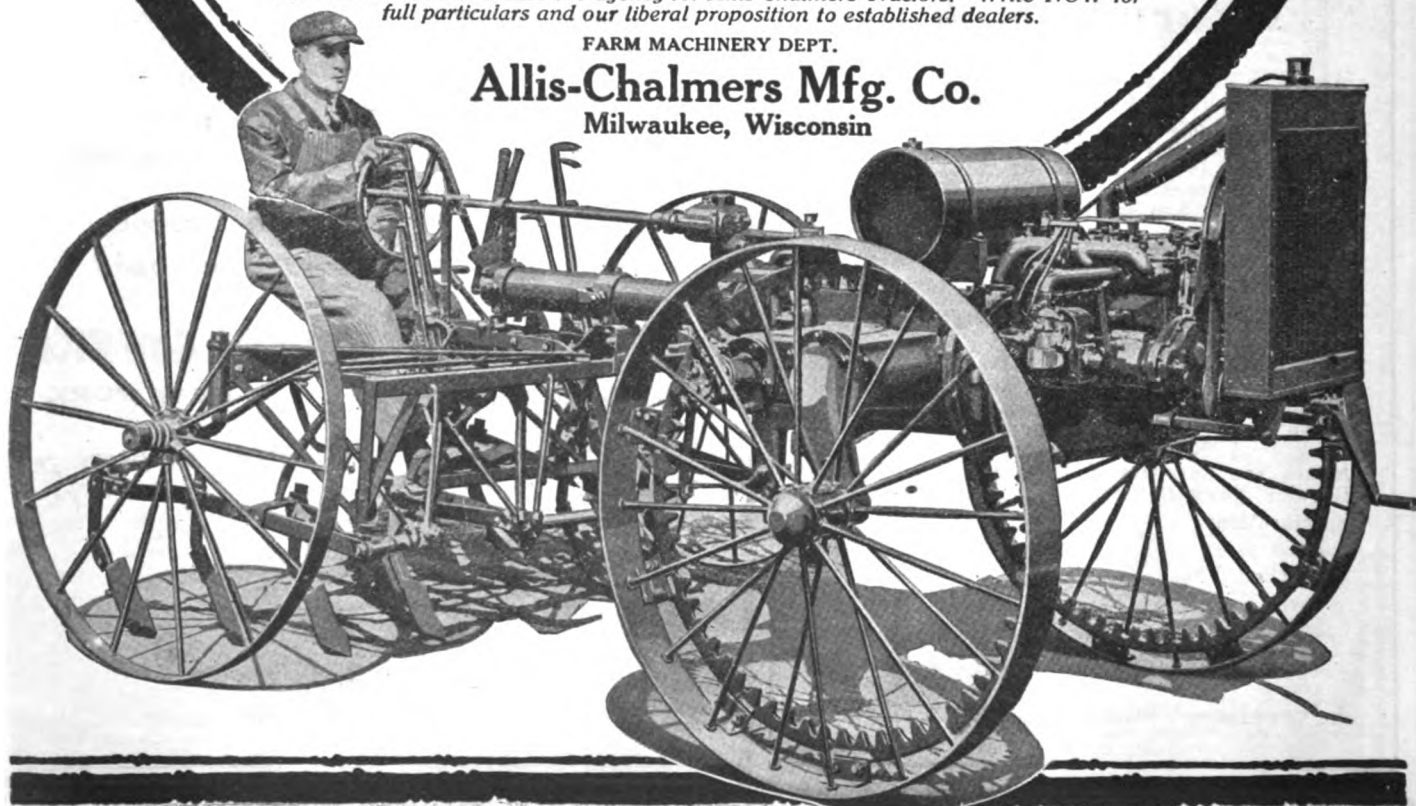
Allis-Chalmers' strength and solidity insure the permanence of the business the dealer builds on this wonderfully efficient and economical machine. It will establish you in the

tractor business to *stay*. For heavier work, the Allis-Chalmers 10-18, a three-wheel tractor using either kerosene or gasoline, or the Allis-Chalmers 15-30, a four-wheel tractor which also uses either fuel, cannot be excelled.

*Now is the time to secure the agency for Allis-Chalmers Tractors. Write NOW for full particulars and our liberal proposition to established dealers.*

FARM MACHINERY DEPT.

**Allis-Chalmers Mfg. Co.**  
Milwaukee, Wisconsin



More than 2000 in California!



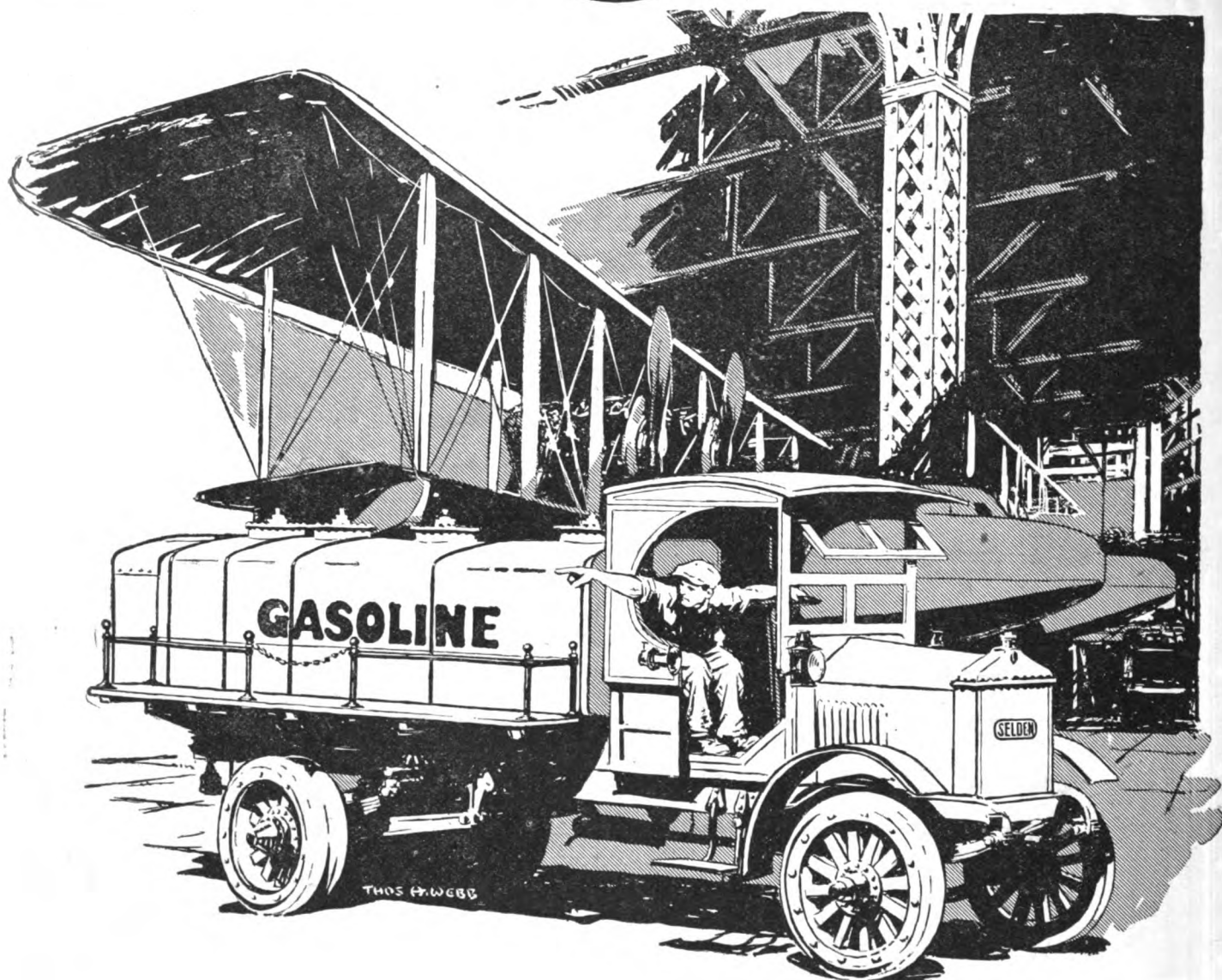
We think mighty well of California because it is one of the most responsive motor-ing states in the country. Its dealers are live, red-blooded human beings. They are progressive and successful.

Motor World covers the dealers, jobbers and garage owners of California with a paid circulation in excess of 2000 copies per week.

This is a well defined circulation in a well defined territory.

Our circulation among dealers, jobbers and garage owners in other states is equally impressive.

# Selden Trucks



To meet the Nation's war-time demands requires more than usual construction in a motor truck. Greater carrying capacity, greater speed and greater powers of endurance must be there—all these with low cost of operation and maintenance.

**SELDEN TRUCKS** are meeting these unusual demands of the Nation at home, of allied Nations abroad, and of a host of commercial institutions at home and abroad that are profiting daily by their use.

One to Five Ton Worm and Internal Drive Models. Write for full information.

**SELDEN TRUCK SALES COMPANY**  
ROCHESTER, N. Y., U. S. A.

When writing advertisers please mention Motor World—it identifies you

# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, December 18, 1918

No. 12



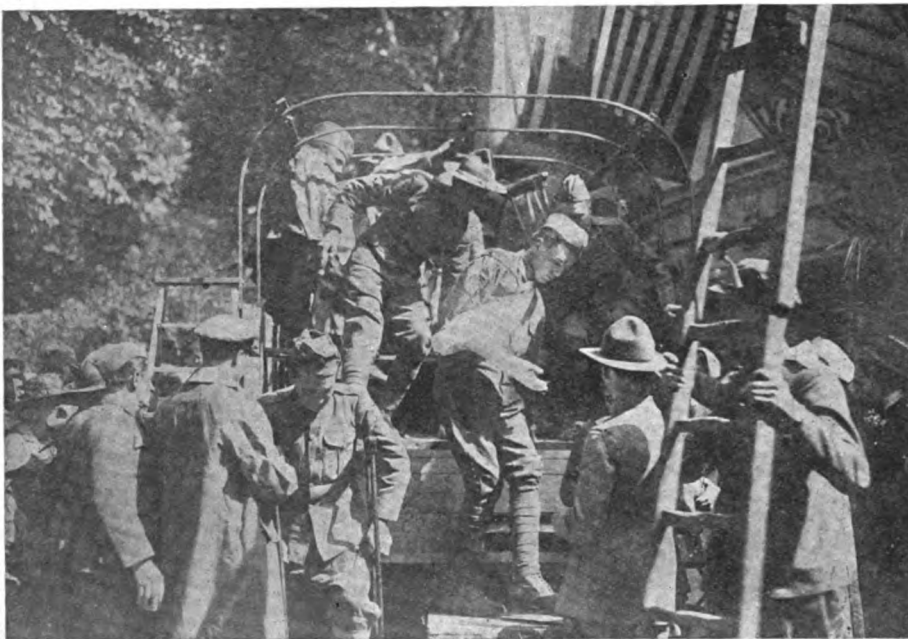
*"oo! Gran'pa, we forgot sompin'"*





Answer "Here" to the  
*American Red Cross Christmas Roll Call*

All You Need Is a Heart and a Dollar, and There  
Isn't An Automobile Man Who Hasn't Both



**W**HO knows but that the lad on the crutches at the left front in this picture may walk down the main street in your town some day?

If he does, YOU'LL cheer him.

Who knows but that the crutches he is using may be paid for with the dollar with which you answer the Red Cross Christmas roll call?

If so, he'll cheer YOU.

After a while the opportunity to give to the Red Cross will be gone. Give now before it is too late.

When you get your button, or whatever it is you'll get, put it away and keep it as a remembrance of the greatest Christmas the world has ever known.

Make sure that every member of your organization has an equal chance with you to be a part in this great giving.





# Wanted—A Federal Highways Commission

*We Are Going to Have Good Roads; We Can't Stop Them—  
So Let's Set About Getting Them in the Right Way*

By Stanley P. McMinn

**WHEREAS**, The President of the United States in his recent message to Congress, recognized the value of improved highways in the general transportation system of the nation and definitely recommended and urged their rapid development; and

**WHEREAS**, This work is necessary to give employment to our returning soldiers and also to furnish worthy projects on which unemployed labor can be engaged during the period of readjustment; and

**WHEREAS**, We recognize the necessity for a well-defined and connected system of improved highways in order to expedite the distribution of large volumes of foodstuffs now wasted on account of the lack of prompt and adequate highway transportation and to better serve the economic and military needs of the nation,

**THEREFORE, BE IT RESOLVED**, That a Federal Highways Commission be created to promote and guide this powerful economic development of both highways and highways traffic and establish a national highways system.

**BE IT FURTHER RESOLVED**, That the present appropriations for Federal aid to the States be continued and increased and the States urged to undertake extensive highway construction so as to keep pace with the development of this country and its transportation needs, and in carrying out the provisions of the present Federal Aid Act or any amendment thereto that the State highway departments should co-operate with the Federal Highways Commission.

**BE IT FURTHER RESOLVED**, That all governmental activities with respect to highways be administered by the Federal Highways Commission.

**CHICAGO**, Dec. 13.—It begins to look as though the United States would soon have a Federal Highways Commission and a system of national highways which only such a commission can insure. The public wants these things; representatives of forty-four out of forty-eight State highway officials voted for them last week in Chicago; the trade is strong for them—and there you are.

It was the all-important question as to whether there should or should not be a Federal Highways Commission that drew more than 1000 persons to this Chicago conference. The gathering was called together by the Highways Industries Association and the meetings were held jointly by this body and the Association of State highway officials.

Both of these bodies unequivocally placed their stamp of approval upon the proposal that such a commission

be appointed, the action taking the form of the unanimous passing of the resolution reproduced herewith.

The meeting brought out the crystallized sentiment of every State in the Union and made very plain the necessity for continued and continuous highway development as an economic necessity in this time of reconstruction.

## Roads Must Come

It left no room for doubt regarding the development of good roads all over the United States. The uppermost thought was that good roads are coming; that their coming cannot be stopped; and that the most intelligent method of handling the whole matter at the present time is to so direct the good-roads movement that the maximum benefit may come out of it for all—through a Federal Highways Commission.

Such a commission would be formed of five big, broad-gaged men of vision, and upon the commission would devolve the duty of mapping, building and maintaining a system of national roads totalling approximately 50,000 miles, to serve fully 90 per cent of the population of the United States, to cost in the neighborhood of \$25,000 a mile and to be fed by a system of state and county roads built by the states and counties with Federal aid.

That, in brief, is the ambitious plan which is at present in contemplation. Whether or not it goes through depends upon the action of Congress. At least, the ball has been started rolling, and behind it there is the accumulated energy of enthusiastic and thoroughly competent state engineers, business men, civic authorities and the public.

## Sentiment Long Smouldering

For a long time sentiment in favor of Federal control of a Federal Highway System has been gathering headway. When the Government took control of the railroads and steamship lines and the telegraph and telephone lines soon after the United States entered the world war, demand for such action with regard to our national highway systems, long latent, began to take definite shape.

There were numerous rumors that executive action would place at the head of the highways system a centralized authority like those placed over other transportation means. But nothing came of it.

Two weeks ago at the Reconstruction Conference of the United States Chamber of Commerce practically all the various separate war service committees placed themselves on record as favoring a "separate and distinct Federal Highways Commission whose duties it shall be to construct and maintain a system of national highways." And the action of the entire conference was crystallized in the passing of a resolution urging that the carrying on of all public works, which may be taken to include the building of roads, be stimulated and accelerated.

Now comes the Chicago meeting, which after 3 days of deliberation and discussion—discussion which involved the biggest highway brains and the brightest vision for the future—places itself on record definitely recommending

that Congress appoint a Federal Highways Commission with authority to spend Federal money on a national highways system which shall link up the entire United States in a network of hard-surfaced roads.

#### Action Should Be Far Reaching

It is the first time that concerted action on the question has been taken, and in view of the importance of the question, and of the importance of the individuals who have given their approval to the project, it may be expected that the action of the meeting will have a far-reaching effect.

E. J. Mehren, vice-president of the Highways Industries Association and editor of *Engineering News-Record*, made an inspiring plea for the appointment of a Federal Highways Commission, and perhaps his words better than those of anyone else can bring out both the advantages of and the necessity for such a commission. He said in part:

"\* \* \* I come to you with a plea that the United States shall take the final step in rounding out the highway system of the country, by superimposing upon our excellent county and state systems a National Highway System, to be built, maintained and controlled by the National Government itself.

"In its effect upon the farmer, in its effect upon the cost of living, in its influence on national morale, no single transportation agency is as important as the highways, and I urge that the Federal Government, as the only agency capable of building and administering an adequate system, embark on this great project.

"It will return in increased property values, and in lower transportation costs, all that is invested in it, and it will contribute very materially to the further welding together by encouraging interstate highway travel of all the people of the country."

#### A Fundamental of Business

And again, this time by Fourth Assistant Postmaster Blakslee:

"If increased production is urged and no provision made for its distribution, we overlook one of the fundamentals of business."

Another who made a strong plea for more good roads and for the maintenance of those we already have was George M. Graham, president of the Pierce-Arrow Motor Car Co. and chairman of the Motor Truck Committee of the National Automobile Chamber of Commerce.

Graham gave some illuminating figures upon the effect of good roads on transportation efficiency and epitomized the feeling of the truck makers at the meeting when he said, in referring to the alleged damage done to roads by trucks:

"The truck is as much sinned against as sinning." The object to be sought,

Provisions of Model Motor Vehicle Law			
Height .....	12 ft. 6 in.		
Width .....	96 in.		
Weight, Vehicle, Body and Load.....	24,000 lb.†		
Weight on tire per inch of width.....	800 lb.		
Speed (M.P.H.)	Maximum	Suburban	City
Pneumatic tired vehicle under 6000 lb.....	30	20	15
Other pneumatic tired vehicles.....	25	20	15
Solid tired vehicles, 4000 to 28,000 lb.*.....	25	15	12
Buses:			
6000 lb.....	30	20	15
7000 lb.....	30	18	16
8000 lb.....	25	20	12
Trailers:	Same as Trucks		
*With following exceptions:			
4000 lb.....	25	20	18
8000 lb.....	20	18	15
12,000 lb.....	18	15	12
16,000 lb.....	16	15	12

†Highway Commissioner has discretionary power to increase this weight to 28,000 or more depending on condition of roads.

he emphasized, is quite as much to find some means of fitting the road to the truck as it is to find a way to fit the truck to the road.

As a means to the first end Graham stands squarely upon the platform for good roads—hard-surfaced roads that will last, and for proper maintenance of roads that have not hard surfaces.

#### Uniform Motor Vehicle Law

And as a means to the last end, Graham suggested a uniform vehicle law, applying alike to horse-drawn vehicles and motor trucks and effectually wiping out the bar to interstate highways transportation at present imposed by nearly forty-eight different kinds of state laws.

Graham sees a great expansion of interstate motor truck transportation. The war has already expanded such traffic to a point that has brought forcibly to the attention of both state officials and the public the need for proper legislation to encourage and stimulate a still further expansion, and the prime need of legislation at present, in his opinion, is a pattern after which the various states may work in creating a harmoniously operating whole.

As a corollary to the need for more good roads, he pointed out that as the result of dynamometer tests it had been demonstrated that whereas it required a pull of 218 lb. to move a certain truck over a dirt road in poor condition, the same truck could be moved over a good hard-surfaced road with a pull of but 27 lb. If the average speed of a truck might be 16 m.p.h. on such a good road, it would drop to 9 m.p.h. on a road that is only fair and to as low as 4 m.p.h. on a poor dirt road.

#### What One Company Did

And as a final clinching argument for the greater expansion of highways transportation he cited the case of the Syracuse Smelting Co., which is at present shipping its products to Philadelphia in three ways, by boat, by railroad and by motor truck. By railroad the time con-

sumed was 171 hours and the cost 30½ cents per hundredweight; by boat the time was 44 hours and the cost per hundredweight 32½ cents; by truck the time was cut to 11½ hours and the cost was but 35 cents per hundredweight.

As a means to fit the truck to the road Graham suggests that in a uniform motor vehicle law the maximum allowable weight for any truck with body and load be limited to 28,000 lb.; that a plate giving the maximum allowable weight of every truck be attached to the truck, and that exceeding this weight be prima facie evidence of a misdemeanor, properly punishable. Trailers would be included under this measure.

Above are the recommendations which Graham makes and which he would see incorporated in a uniform motor vehicle law.

#### Williams Again Heads Highways Industries Association

CHICAGO, Dec. 16—S. M. Williams of the Garford Motor Truck Co. was re-elected president of the Highways Industries Association at the annual meeting held here last Friday. Other officers elected were: First vice-president, G. P. Coleman; chief engineer, Highways Department, W. Va.; second vice-president, E. J. Mehren, editor, *Engineering News-Record*; third vice-president, Charles J. Lang; secretary and treasurer, H. G. Shirley; directors (class A membership) W. P. Blair, National Paving Brick Assn.; A. T. Rhode, Granite Pavement Block Mfrs. Assn.; E. J. Mehren, National Assn. Asphalt Block Mfrs.; W. T. White, N. A. C. C. Directors (two years), W. E. Metzger, E. J. Sutton, A. P. Sandles, Philip Koehring. Directors (three years), H. J. Love, W. O. Rutherford, A. N. Johnson, S. F. Beatty. David S. Ludlum, president of the Autocar Co., Ardmore, Pa., was elected to Class B membership. The following national associations have made application for Class A membership: National Vitrified Pipe Mfrs. Assn.; The Lime Assn.

# The Great Discovery

By Clyde Jennings

## *What Drexler Discovered*

**S**OME motor car dealers have been more surprised at the volume of accessory sales they could command than they have at the war itself. They have learned these things:

1—Accessory sales mean lighter overhead, in some cases no overhead for machines.

2—Accessories will provide a clerk who can always be in the salesroom.

3—Accessory buyers often tell of motor car prospects.

4—Accessories are not just freak stuff. Most accessories are useful things, such as tools, cements, polishes, etc. Car owners buy these things over and over.

5—If you do a tire business right, just count up your cars, four tires to a car and see how it runs into money.

6—Accessories are things to be sold, not given away.

**I** ASKED J. G. Drexler the other day if he thought the motor car dealers had learned anything about the value of accessories as profitable merchandise during the war. Drexler looked at me blankly:

"Have they! Why, man, a lot of dealers have just learned that there is such a thing as accessories. To some it is more astonishing than the war itself. I know of a dozen salesrooms that I could name off-hand that are carrying the overhead—heat, rent, light, clerical hire and some other items—by selling accessories. *Some of these folks never sold an accessory before, but you can bet they never will quit.*

### Profitable to Have Accessory Clerk

"The thing that will stick is this: An accessory department will make it profitable at all times to keep a clerk in charge of the salesroom and there never will be a day without an entry on the cash book. Then, too, it means prospects all the time to have people coming in and spending money and talking with the clerk.

"The clerk need not be a motor car salesman, but just some one

who has learned something about the accessories and who can call the boss from more important duties than watching the front door."

All of this of course was interesting. Also a bit surprising from what I had heard from some other motor car distributors—for the Mid-West Accessory Co., St. Louis, for which Drexler is sales manager, is a subsidiary of the Overland Automobile Co., of St. Louis. Most motor car distributors around here do not think much of accessories and there was a time when the Overland company apparently did not. But they do now.

It is the easiest matter in the world to get H. R. Henry, the salesmanager of the company, started on talking accessories. He is all enthusiasm. So is Roy Campbell, buyer for the accessory department.

But Campbell came into the business through a different path than the others. He formerly was in charge of the retail accessory department of the Hudson-Phillips Motor Car Co., of this city. He learned the business there and has always known that a motor car dealer could sell accessories to an advantage.

With Henry and Drexler, it is different. Henry is a car man who can see beyond passenger cars.

Drexler was a radical until his experience at the Overland plant converted him. He learned the accessory business with the Simmons Hardware Co. of St. Louis, one of the largest wholesale hardware houses in the world, if not the largest.

"I was trained there to believe," says Drexler, "that accessories should be sold only by outsiders; that such small things as a spotlight were not big enough for a man who sold \$1,000 items. The Simmons company sold what appeared to me to be a lot of accessories—and it was. But if the Simmons company sold only the accessories their dealers and the dealers' kinfolk used that would be a lot.

### The Difference

"The difference is here. The orders at the hardware house ran in one-sixth dozens; here they run into six dozens. That shows the difference between the hardware store and the motor car dealer or garage owner. But my real conversion came soon after I came down here.

"I was passing the counter one day when I saw a merchandising official of the Simmons company buying a spark plug. I stopped to see what he was there for. He told me they were the kind of plugs that came with his car. Now, down at his store there was every kind of spark plug that was made, and here we had only two or three kinds. That made me think. The conclusion was obvious: The accessory trade belongs to the man who sold the main article of barter, and will come to him naturally. He can get it cheaper than anyone else, because the other fellow has to turn the

## BUNK THOUGHT THE WAR WAS OVER, BUT—

By Roche



channel. From that time on I have been an enthusiast in putting the motor car dealer in the accessory business."

"What sort of dealers are taking on accessories, and what are they selling?" I asked.

"The Overland company has had a number of dealers who have kept a few accessories in a case and let them sell themselves," said Drexler, "and now these dealers are speeding up. Since cars have been scarce and prices higher, a good many owners have been slow to sell their old cars and buy new ones. Rather they have been spending money on the old cars. As a result they have stirred up the dealers. New lamps, new upholstering and other things came to them without effort.

"But that is not the really big business. The heavy trade is being built up in tools, radiator cement, other cements and generally in repair goods.

#### Then and Now

"The service shop for several months has had too much work. In former days when it was a question of keeping the men busy except in those rare hours when there was too much work, any motor dealer would trot a man out to the curb at call and tighten this bolt, clean a grease cup or loosen a valve and say, 'Oh, that's all right,' wave his hand and be a good fellow.

"Now it's different. The men in the shops are all busy on big jobs that have been promised on time. There is profit in those jobs, and the shop owner realizes that he must get that money, for it is the only visible means of support for himself and his staff. His salesroom has no cars in it. He is conducting his shop as a shop ought to be conducted.

"So when Mr. Car Owner drives to the curb and asks to have this little matter attended to, Mr. Proprietor says:

"All right. But the men are all busy this morning. We probably can have your car ready by 4 p. m. if everything goes right on the work we have in hand. Oh, no; I could not send a man out now. Those men cost me \$1 an hour, and we have pledged the honor of our force that Dr. Pills shall have his car this afternoon. He's awfully busy now—influenza, you know—and he says that borrowed car makes him nervous."

"By that time it has dawned on Mr. Car Owner that he not only is not going to get his car promptly, but that Mr. Proprietor really expects him to pay for this measly little matter. So when Mr. Proprietor suggests, 'You might save time and trouble by getting one of these little tool cases, and doing these things yourself,' he is ready to listen. Not only does he listen, but he buys, for he figures that the tool case will cost only about what he will be charged for a \$1-an-hour man plus profit.

"There is nothing like war to change opinions. The motor car Kultur was not as bad as the German brand, and perhaps it is not as badly whipped—but it is whipped.

"Another thing—a rent bill will make a man think when nothing else will. You have read a great many fiction stories about the man about to be evicted who suddenly jumped on the water wagon, and his family was happy ever after. Well, a good many motor car men were about as near eviction as 'Drunken Bill' when they jumped aboard the accessory wagon, and some of them are going to be happy ever after.

"It is the staple accessories that are

selling from jobbers now. The war and State laws have leveled public opinion. Also they have left on the hands of accessory dealers all over the country great quantities of freak stuff. Why any dealer should ever have bought several dozen freak sirens or freak spotlights is beyond me.

"This foolish buying has been the curse of the accessory business. Thousands of dollars have been invested in junk. It is the sugar and flour of the accessory business that makes the money. It is the stuff that is moving to-day. People are seeing that they get the worth of their money.

"We are assuring our customers that we will not sell them a cement until we are assured that it will cement the very things that it says it will cement on the label.

#### The New Catalog

"Our new catalog will be different from any other accessory catalog. We accepted the suggestion to conserve on paper, and we have dropped many cuts that were not needed. We are making it business from one end to the other. Also we are using the odd spaces for suggestions as to getting business that have come to us from our dealers and others. We are convinced that there is a great future for accessories among the motor car dealers."

"But you did not tell me who are taking on this line," I said.

"Mostly the dealers who have sold so many cars their shops are busy all of the time. These former dealers have so few men left that most of them are working themselves. They have not time to sell lighting plants or tractors, but they want a self-supporting clerk. The accessory stock is the answer."

**L**UMBERMEN in Pennsylvania are beginning to think that the old gray mare "ain't what she used to be."

*They had been fretting for some time about her slowness in the woods and in moving finished material to the railroad.*

*And then the customers of the mills began to jog 'em about it.*

*Result—gasoline tractors with trailers are chugging or crawling around in certain parts of the Keystone State's woodlands, profits are beginning to increase and customers are feeling better since the exit of the team in these localities.*

*Listen to what one lumbering firm—the largest in Forest County, Pennsylvania—has to say about eliminating horses in favor of tractors.*

# Good Night, Horse! Good Morning, Tractor Lumberjack!

## Tractors and Trailers Supplanting Horses in Pennsylvania Woods and Are Saving \$10 a Day Each

By K. H. Lansing

**G**ASOLINE TRACTORS are increasing the lumberman's profit to such a marked extent that in some localities they are rapidly supplanting horses in the big woods of Pennsylvania, all to the profit of the automotive dealer.

The lesson taught in the forests of California and in the vast wooded stretches of Oregon, as well as elsewhere in the big tree region of the West, is now being reflected in the East. *And the trailer is helping out.*

Tractors aren't hauling 30 or 50-ft. logs or poles without the trailer as a very necessary "caboose." The lumberman of Pennsylvania has found out that horses in the lumber business are an unnecessary expense.

One horse in one season uses the produce of five acres of land, so livestock men aver. Whether in the stall or working, the teams' feeding goes on daily. The average horse, with ordinary weather and road conditions, maintains a speed of two miles an hour. For instance, if there is an installation to be made twelve miles away and extra poles are needed, it takes a horse six hours to get there.

*If the same load were piled on a tractor with a trailer attached, the crew would reach the scene in less than an hour.*

Whether it's wood in the bark, or the finished product like poles, that is being transported, five hours taken out of the shank of the day because of adherence to horses as motive power means a loss of money and opportunity.

The largest lumbering firm in Forest County, Pennsylvania, is one of the latest concerns in the Keystone State to be convinced that when tractors supplant teams in the woods profits increase.

This is Wheeler & Dusenbury, of Endeavor, manufacturers of white pine, hemlock and hardwood. The firm was established in 1834 and had plenty of time to try out the team proposition.

### Do Everything Horses Do—and Then Some

As a result of comparison with the gasoline tractor, the concern has decided to add to its tractor batteries and gradually eliminate all its horses for hauling in the woods. It finds that the machines can do everything that the horses can, besides many things that they can't. The tractors can penetrate places where horses cannot go and of course can pull much heavier loads, while many hours a day are saved as against the horse-and-vehicle system.

The firm has had the tractors for only a short time and, while quite convinced that the tractor is the motive power par excellence for the woods and for trans-

porting from the factory, full experimentation has not yet been made to ascertain all the merits of the gasoline machines.

The firm is starting with Cleveland 12-20's. Though small, this type of tractor has been found by Wheeler & Dusenbury to accomplish all in their line of business that has been claimed for it.

Take the case of one of their tractors in the backwoods as a sample of economy.

"It is supplanting two teams," said Wheeler, of this firm, to the writer, "and as near as we can ascertain it is saving us about \$10 a day as against the horse-drawn plan. By next spring we shall be able to tell more about our general experiments with tractors."

That Wheeler is expressing his honest opinion and not "boosting" any special make of gasoline tractor is indicated by his remark that "we are not yet far enough along with our experiments to make any sweeping claim as to efficiency, as that would be premature. We do not yet know in its entirety the cost of upkeep."

Yet a saving of \$10 a day known to be made on each tractor that is supplanting a team is a considerable item.

And this firm so appreciates the work, potential and actual, of the gasoline tractor that it is also using a Cleveland 12-20 on its large farms, in addition to the lumber and hauling work, thus supplanting more horses.



The estimated cost of operation of a Cleveland 12-20 is thus given:

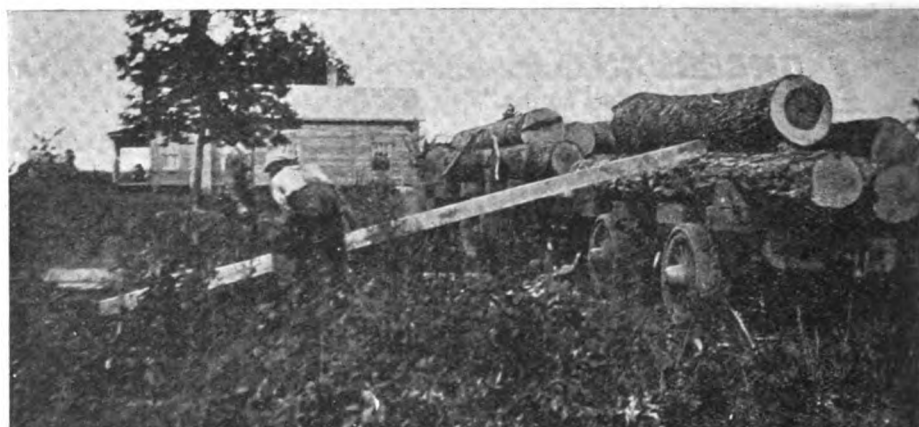
Estimated Cost Per Day of Tractor Operation		Per Year
Depreciation at 20 per cent on \$1,385 .....		\$277.00
Interest at 6 per cent on \$1,385 .....		83.10
Fixed charge per year.....		\$360.10
Cost Per Day		
Fixed charges, 300-day year....		\$1.20
Direct Operation and Maintenance, Per Day		
Gasoline at 25c., 14 gal.....	\$3.50	
Oil at 60c., 2 qt.....	.30	
Mechanical repairs .....	.50	
	\$4.30	
Operator at \$3 per day.....	\$3.00	
Plus fixed charge expense.....	1.20	
	\$8.50	
Cost per day while tractor is idle	\$1.20	
Cost per day while tractor is working .....	8.50	

Another lumberman, who is employed by a Forest County concern, in speaking of the usefulness of the trailer as an adjunct to the tractor in lumber operations of various kinds, said:

"Trailers, as well as tractors, are playing an important part, just now, in the lumbering business. This is a business where the hauling problem probably is more important than in any other industry, for the reason that efficient transportation makes a great difference in costs than in the usual business of moving material.

There are at least five different hauls from the time the product of the woods leaves the forest until it reaches the building stage, and the concern, which is both lumber hauler or contractor and manufacturer, has a somewhat complex problem.

Everyone of the five hauls involves expense and, if the figuring is not pretty close, somebody is going to lose a considerable amount of money. Lumbermen, both operators and retailers, have



Loading tractor-trailer outfit in lumbering operations. The tractors are Troys

had especially to do "cheese paring" to put their haulage on the proper basis of economy and efficiency, and that is the reason why horse haulage is being discarded. When feed, as is now the case, is selling at an almost prohibitive price, and when drivers are high-priced and hard to get and to keep when hired, and when up-to-date customers, used to rapid transportation, complain of slow-going team haulage, the lumberman knows it's curtains for the horses.

"Now," continued the lumberman, "to win out even with tractors, or heavy motor trucks, you've got to get the maximum pulling and loading power out of your machines, or as profit-producers they will prove disappointing. The payload is attained by using a trailer—at least one—with every tractor or truck—in fact how are you going to use either tractors or motor trucks for long pieces such as logs and poles unless you have a trailer or so?

"Where timber tracts are situated at considerable distances from the mill, your tractor enters largely into the transportation end, in addition to doing the rough work in the woods. Heavy timber is being hauled as far as 50 miles from some mills with a combination of tractor-and-trailer.

"One condition, which obtains in the

Far West more than in Pennsylvania, or other eastern and also southern States, is the prevalence in some localities of the portable sawmill. It is now possible for the lumbermen to establish mills in isolated tracts and by means of tractor and trailer outfit haul the logs to the mill and then the lumber to the railroads. When the lumber on one tract is exhausted, the tractor and trailers then are used to move the mill itself to another position."

## Westinghouse Unit Light and Power Plant

THE Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., makes electric light and power outfits for farm use in four sizes. These plants all have direct-current, 32-volt, shunt-wound generators, Hyray-Exide batteries, semi-automatic control panels on which are mounted the generator field rheostat and automatic cut-out and cut-in, for control of the battery circuit, switches, fuses, ammeter and ampere-hour meter. Sockets are provided for pilot lights and ground detector lamps.

Plant No. 1 has a 44-ampere-hour battery and sells for \$366.

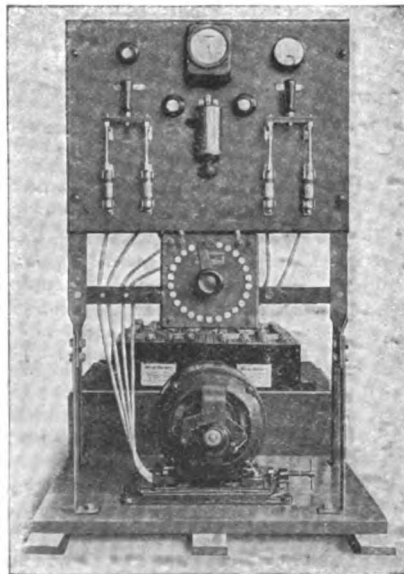
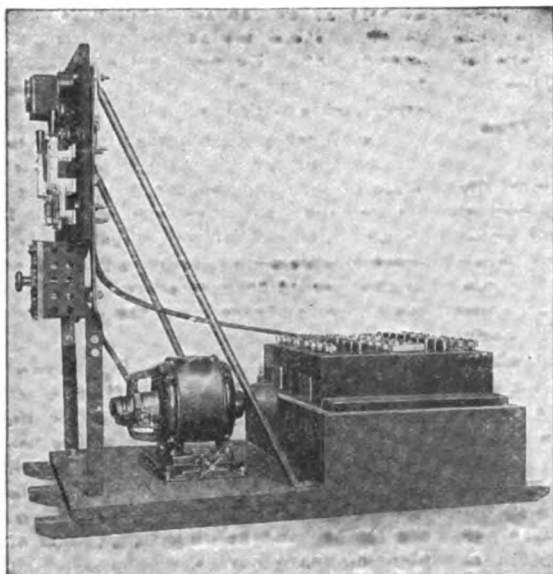
Plant No. 2 is rated at 78 ampere-hours and is priced at \$404.

Plant No. 3 is of the same capacity as No. 2, excepting that it has a larger generator; the price is \$442.

Plant No. 4 is rated at 117 ampere hours and lists at \$484.

The generator is a Westinghouse CD low-voltage direct-current machine. The

(Continued on page 43)



At the left is the complete Westinghouse farm lighting system set up and ready to operate. The switchboard is shown at the right

# Farm Light Is an Opportunity for Him Who Awakens

*The Country Wants Light—The Automotive Dealer Has the Skill and Equipment for Sales and Service—And the Manufacturer Should Keep Step With Progress*

LOS ANGELES, Dec. 16—Remarkable opportunity awaits the motor car dealer of the Pacific Southwest who awakens to the possibilities represented in the farm lighting system as a merchandising proposition. There are a few small city and town dealers who already have taken on an agency, but there is a vastly greater number who have not even so much as made an inquiry to learn what uses the lighting system might be put to in their immediate vicinity or the various types of outfits now on the market. And if ever a Los Angeles distributor goes into the business and establishes an agency with each of the outlying dealers there will truly be a livening up all along the line.

## Makers Must Change Their Ways

But the light system manufacturers will have to change their ways. Accustomed as they are to promptness in correspondence, these big distributors draw conclusions from business methods of others. One two-car distributor here, whose territory includes all of Southern California and the entire state of Arizona, says that a month ago he wrote a light system manufacturer who was advertising in trade magazines for agents and never got a reply to his letter. About twelve days ago he wrote another manufacturer and to date has received no answer. Naturally he thinks there must be something wrong when concerns abuse correspondence in this way.

Lighting systems now represented here are doing the distributing through accessory houses. These houses have no means for providing service to users and, in fact, do not accept service responsibility. They are, however, marketing through automobile dealers wherever they can

place the agency and passing it on to the retailer to look after all service demands.

Even the small-town motor car sub-dealer is accustomed to getting help and assistance along service lines from the distributor, and if ever he goes into the light business in earnest he will make demands upon the distributors that must be met. What will the accessory dealer-representative without mechanics do then?

## Small Towns Offer Sales Opportunities

The small towns in this part of the country offer a splendid sales opportunity to the live wire light system representative. In nearly all of these towns the public lighting system has wires on but one or two streets. Further extensions cannot now be made, because of government restrictions. The population wants lights, the public service people cannot furnish them, but the farm lighting outfit would meet the requirements, and meet them satisfactorily. *It only lacks somebody with sufficient enterprise to point the way.*

Scattered throughout this section are numerous foothill residences and estates. Some of these are too remotely removed from power lines to get public service. Long winding drives must be illuminated and so must the garages, stables and other out-buildings. Owners are mostly dependent upon acetylene lighting systems, because nobody ever tried to sell them anything different.

Hundreds of ranch houses continue to use kerosene lamps, although the occupants could well afford electric systems. That is because they do not know of anything more efficient. The writer knows of an automobile dealer who owns a foothill ranch. He needs and wants something better than coal oil lamps and lanterns, but does not know where to go to make inquiry about a real farm lighting device.

The mountain resorts—there are at least one hundred such places within 100 miles of Los Angeles where guests are housed every season—offers another fertile field for the farm light system. Patrons do not particularly enjoy candle

illumination, and when the acetylene lamps in the dance hall are extinguished, having to feel their way about among trees and rocks in stygian darkness. One light system dealer, an automobile sub-dealer by the way, did grab the opportunity and this season installed a Lalley system at Knight's Camp at Big Bear Lake, a popular resort in the mountains.

Sanguinetti's store in Somerton, Ariz., used the non-dependable home-made gas system for lighting. The farm light man saw an opportunity and now the establishment uses the Lalley system. There are other stores in Somerton that might do likewise, and there are myriads of other stores in countless other towns that might be interested. There is one little hamlet in the Santa Cruz mountains that depends entirely upon this same system for its street illumination. No electric power or gas lines reach it, but its inhabitants are just as well served as are residents of Wilshire Boulevard, Los Angeles.

## Motion Picture Houses Good Prospects

Motion picture houses in the small towns offer other excellent opportunities. In Arizona there are a few mines that have installed farm lighting plants with excellent results. But there are many other mines where the only light comes from torches.

Summing it all up, the opportunity for widespread distribution of the modern lighting system exists everywhere and will grow. The automobile dealer has the equipment for rendering service as well as installing the systems. He has the skilled mechanics.

Charles Dundas, of Riverside; J. E. DeYoe, of San Bernardino; C. L. Davis, of Santa Ana; J. F. Carr, of Santa Maria; Thomas McKevitt, of Globe, and Al Webster, of Prescott, all automobile sub-dealers, are seeing the "light." Education would make it illumine the minds of others as well.

Some of these men have a system mounted on a small truck which they use in demonstrating at ranch houses and mountain and beach resorts. When the manufacturers impress upon the car distributors a big opportunity is before them, and when the distributors are made to see it, something will happen.

# WORK NOW

## *To Get a Right Start Back to Business, Action at Once Is a Necessity*

**“WORK! Harder work! Then more work! That is the message we are sending to our dealers. We are going to urge them to get out and beat the bushes. But our big message is work.**

**“To get more from us they will have to ask that we define work. If they know what work means then they will know our program. We began this program the day after the armistice was signed, because we thought that the news from Germany meant the end of the war.”**

The speaker was E. A. Hatfield, president of the Mississippi Valley Motor Co., Oakland distributor for the territory from St. Louis to the Gulf of Mexico. The reason he spoke was because he was asked by Motor World: “Now that you have the opportunity to get back into business, what are you going to do about it?” The above was his answer.

Then he drifted into sidelines of the main topic.

### Entering an Untried Field

“The situation as I see it to-day is that we are entering an unknown and untried field. We do not know what is before us. At the meeting here in St. Louis when the Spring Show prospect was discussed there were some dealers who objected, saying that there was no use spending the money for a show because there was more demand for cars than there were cars, or there would be by the time the season opened.

“Now I do not exactly agree with that. I have an idea that right now if every prospective buyer in St. Louis for the immediate future would come into the salesrooms and pick a car, there would be cars left. I believe that we have been out of business recently chiefly because there was no demand.

“I am not looking optimistically on this spring business, but I am not by any means a pessimist.

“My view is this: This is not a time to sit down and wait. There are cars on the floor right now. They ought to be sold. Someone ought to be out selling

them. We ought to be helping business start. It is our duty to the country, to business and the motor car industry to help business start and start right.

“This firm is not going to stand in the way one particle. We are going to keep up with the procession and we are going to push when we see a place to push.

### Will Not Speculate

“But we are not going to speculate. I believe if there ever was a time when a business man should avoid speculation this is that very time. We are going to play safe, work hard, carry our share of the burden and try to do business in the best possible way.

*“I have some doubts about the demand this spring being greater than the supply of cars. For that reason I am advising our dealers to beat the bushes.”*

“I have always found this to be true: If a dealer gets out, works and works, if there is a big business, he gets his share and is mighty glad he worked. If there is not much business, he gets a bigger proportionate share and is gladder that he worked, worked and then worked harder.

“The only safe method in this selling business is to work and work harder. Just now the man who sits down and

waits for this demand that is coming without anyone looking for it is going to be badly fooled and he is not loyal to the country, nor to his business. If it does come, it will pass by that man who sits quietly unless it is a bigger demand than anyone ever heard of before. The sinner never has done much business. Some men may not appear to work, but if they do business it is a safe assertion that they have a method of working without a brass band attachment.”

The conversation drifted on to the cases of dealers who had quit because of war conditions and to those who had taken on trucks, tractors, farm lights and other things.

### Has No Use for Quitters

“This company, I am glad to say,” said Hatfield, “has not had on its lists any of those dealers who quit because of war restrictions on selling. We have lost a few ‘fair weather’ dealers, but we are glad to shave these off, but strangely we have had fewer of them than usual this fall. We usually have them spotted before they quit. We do not want to sign any of them, but occasionally make a mistake. We already have put under way our campaign to strengthen our dealer situation in towns where we had not been able to get suitable representa-

## A Distributer's Advice to Dealers

*By E. A. Hatfield*

**Work!**

**Work harder!**

**Then work some more!**

If you have taken on a war-time side-line, get a manager for it. If it is not big enough for that, quit it.

Do not be too sure about the demand for motor cars outstripping deliveries. Get out and beat the bushes. If big business comes, all right. You will have your share. If small business comes, you will get more than the man who sat still.

The man who is loyal to his country and his business, will now try to help in every way possible, chiefly by working to get business back to normal.

By getting your business back to a normal volume you can be ready to take back all of the soldier employees.

American manufacturers have done wonders for the war, and they may fool all of us dealers by getting the motor car output back to normal quicker than was expected and quicker than the public gets back to normal—so be sure you are ready.

tion or where our representation was weak. We are carefully inquiring into the facts regarding those who want our car after handling another.

"Some of our dealers have added trucks, tractors, etc. That, of course, is their business and we have no objections. But we expect to make it clear that trucks and tractors and passenger cars do not mix. It is just as *Motor World* said in its *Back-to-Business* editorial. If the tractor business is big enough to keep, it is big enough to hire a manager for. If it is not big enough for a manager, then it must go.

"In this we are not unfair to our dealers nor to the tractor maker. Unless the business is departmentized, the dealer will not do justice to anyone."

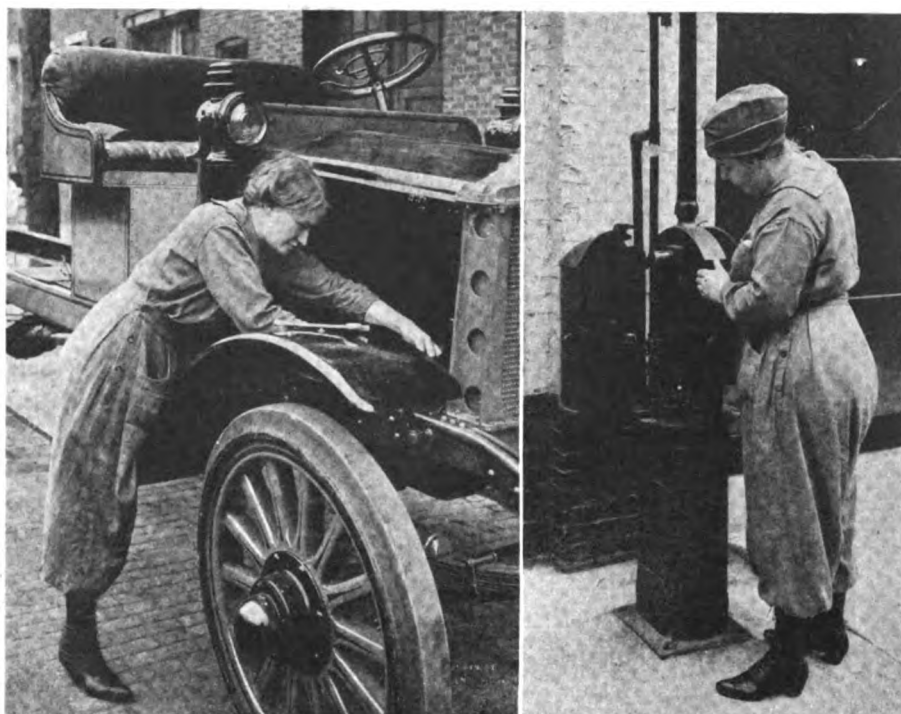
Finally the talk turned to trade-ins, service, etc. Hatfield has some interesting opinions along this line.

"Service for the past six months has been the most serious situation the motor car trade ever confronted, and to my mind the most serious situation it ever will confront. I am anxious to see the relief."

"I know of many towns of 5000 people that are without the services of a mechanic who knows enough to adjust a carbureter. It is simply deplorable.

"The demobilization of the army mechanics is going to relieve this and I hope quickly. Eventually, the service situation will be vastly improved because of the war, but relief is needed soon or cars will be ruined, I fear. The present salvation is in present owners of cars who give their services to their neighbors, most often without pay, in the help-each-other spirit that has arisen, owing to the war, when difficulties have come up.

"Soon the mechanics will begin to drift back. Those who went into the army will be far better mechanics for their experience; and there have been thousands of mechanics made in the army service—good ones, too. We will need them all for a time. Those of us who live in the large cities have no conception of the situation in the smaller towns."



Left—Adjusting the Continental motor in an Atterbury truck at the service station of the Stability Motors Co., 1720-40 Crosskey Street, Philadelphia.  
Right—Woman employee of the same company selling gasoline

Here is some talk on trade-ins that might interest other distributors:

"Our company has never tampered with the trade-in proposition and we know nothing about it. Our car has not been offered as a trade proposition and we have let our dealers know that they were expected to sell cars, not exchange them.

"We never have been asked to finance a dealer who has his money tied up in used cars and I hope we never will. But if the occasion arises, it will not take us long to decide upon the policy to be followed. We will simply tell the dealer that we are not promoting an automobile

exchange. If he trades in old cars, he will have to trade them in at a price that he can handle them so quickly that they will not cause him or us any embarrassment."

Hatfield said that he had no idea what the dealers thought of the outlook, as he had not heard from them. He is expecting that they will begin to inquire as to stocks, etc., soon, but so far they have not written.

This conversation took place the day after the Mississippi Valley Motor Co. had sent out word to its dealers of a reduction in price. As to the price feature, he said:

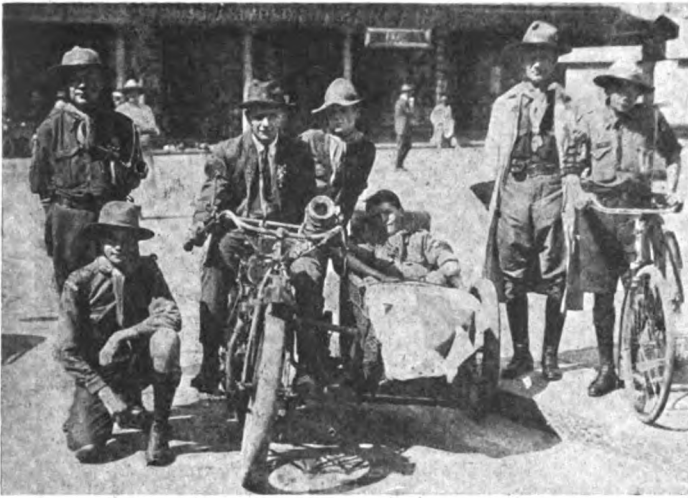
"Of course the public and the dealers realized that the recent prices were war time prices and everyone is looking for reductions. As the new conditions come just at this period of the year, naturally the consumer is doing a lot of thinking. He is going to wait, and I foresee some very dull days immediately ahead.

"The dealer also is thinking about reductions in price and wondering what will happen to him if he orders immediately, so he is going to wait until he gets some assurance from his distributor and his customer. If he can sell one car right away, he is likely to buy one car, or perhaps only reduce his stock one car. This contributes to a small volume of orders right now, and the situation will not be much better for some time. Already some car manufacturers have advertised their reductions. The public is next to the trend, so things will be slow to begin to move and such conditions make it all the more necessary that dealers WORK."



SELDEN DIVISION SALES MANAGERS IN CONFERENCE at the factory at Rochester, N. Y. Front row, right to left: Hal T. Boulden, vice-president and sales director; John F. Coleman, assistant general manager in charge of engineering and production; William C. Barry, general manager, manufacturing division; George C. Gordon, president; Robert H. Salmons, vice-president





*Motorcycles have been called into service. This shows an Indian machine with the side car carrying an influenza victim*



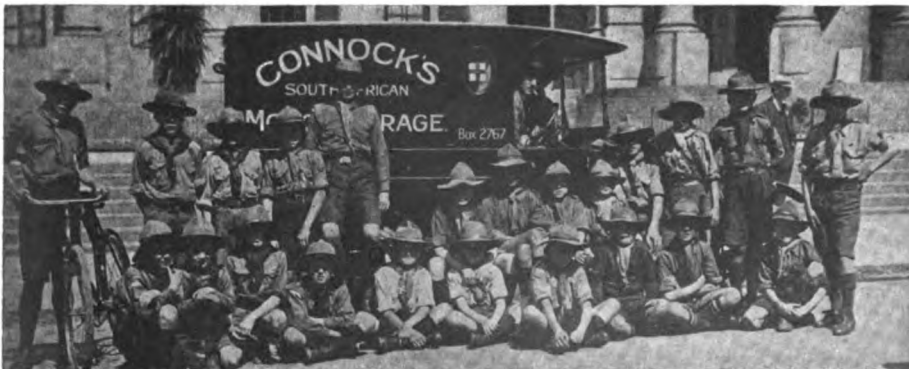
*Soup kitchens have been started in the slums of Johannesburg. The Mayoress is here shown serving soup from a Cadillac*

## How Motor Cars Helped When South Africa Had the "Flu"



*A little old Ford leaving a Red Cross depot with a nurse to fetch a patient*

*Pictures Below—Military and private cars lined up in a main street, ready to start in ambulance service*



*Connock's Garage supplied this delivery vehicle for an ambulance. Boy Scouts rendered important service in aid and policing*

The following is part of a letter from M. Edward, Johannesburg, MOTOR WORLD'S representative in South Africa. His letter is dated Oct. 5.

"You certainly can give us the laugh now about the weather. It is as hot as Pernambuco here now, and you know what that means. Also the whole of South Africa has had a visitation of that mysterious disease, Spanish influenza.

"Johannesburg has been luckier than many of the other cities. In Cape Town and Kimberley things were very bad a couple of weeks ago, and business was at a standstill. The epidemic has been responsible for many deaths among the white and black population of South Africa.

"Private motor vehicles of all descriptions have been called into service in all the towns. I enclose a few pictures showing the good service of the vehicles turned into ambulances.

"Trucks and tractors are coming in this country, and the American manufacturer has an exceptionally fertile field here."

### NEXT WEEK

Complete report of the convention of the National Association of Automobile Accessory Jobbers



# THE LAW

By George F. Kaiser

## Perplexed?

*Does some point of law perplex you? Why don't you ask Motor World's legal editor to discuss the question?*

## Whose Lien Is First?

The question of whether the lien of a garageman or automobile repairman or the claim of a dealer who sold a car under a conditional bill of sale or subject to a chattel mortgage comes first is a vexing one because of the fact that there are different decisions in the different states.

The garageman and repairman of course contend that when the car is sold the seller must know that it will need repairing at some time, and that, as they oftentimes have no notice of chattel mortgages or conditional bills of sale, it is a hardship not to allow their lien to come first.

The motor car dealer, on the other hand, naturally contends that his chattel mortgage or conditional bill of sale should come first if he complies with the state's statutes as regards filing or recording.

Who comes first? The courts are not at all in accord in their answers.

In some states like New York and New Jersey, the garageman's lien law specifically provides that the lien given shall be superior to chattel mortgages and conditional bills of sale. The decisions in California, Nebraska, Kansas, Maryland, North Dakota and Mississippi are to the same effect.

On the other hand the states of Illinois, Indiana, Wisconsin, West Virginia, Nevada, Tennessee and Washington hold that the lien of a garageman is inferior to the lien of the holder of a conditional bill of sale.

In the state of Tennessee there is still another doctrine, and there whichever lien is filed first comes first for payment.

Even conditional sales themselves are not regarded in the same way in the various states.

In the states of Kentucky and Tennessee the conditional sales contracts are not at all favored, and consequently they have been held to be void as against public policy in any number of decided cases.

In New York, Indiana, Mississippi and Texas the courts have regarded them a little more favorably and accordingly have held them to be valid as between the parties who make them and also as against those people who have notice of them. This is only held to be true, however, when they relate to specific articles, like automobiles, gasoline pumps, etc.

Ohio, Minnesota, North Dakota and Wisconsin are still more lenient with re-

gard to their interpretation of contracts of this character and hold that they are binding and valid, except when they are not filed or recorded in the proper office, as required by statute. When they are not so filed they are held void as against people who innocently purchase the property or accept mortgages on it without notice.

Michigan, Massachusetts, Vermont, Connecticut and Arkansas are most liberal with regard to their interpretation of conditional sales contracts and strongly favor them and hold them to be valid against all persons, even including mortgages.

## The New Jersey Lien Law

Perhaps the best garageman's lien law on the statute books of any state in the Union is that of New Jersey. It should be seriously considered when a lien law is contemplated for any state which is without one. It is as follows:

All persons or corporations engaged in the business of keeping a garage or place for the storage, maintenance, keeping or repair of motor vehicles and in connection therewith stores, maintains, keeps or repairs any motor vehicle or furnishes gasoline, accessories or other supplies therefor at the request or with the consent of the owner or his representative, whether such owner be a conditional vendee or a mortgagor remaining in possession or otherwise, has a lien upon such motor vehicle or any part thereof for the sum due for such storing, maintaining, keeping or repairing of such motor vehicle or for the furnishing of gasoline, accessories therefor, and may without process of law detain such motor vehicle at any time it is lawfully in his possession until such sum is paid.

Any person or corporation acquiring a lien under the provisions of sub-division one of this section shall not lose such lien by reason of allowing the motor vehicle or part or parts thereof to be removed from the control of the person or corporation having such a lien and may, without further process of the law, seize the motor vehicle or part or parts thereof wherever the same is or are found within the State of New Jersey.

All such property so held by any such garage keeper or automobile repairman shall, after the expiration of thirty days from the date of such detention, be sold at public auction upon notice of such sale being first published for the space of two weeks in some newspaper circulating in the city, borough, town, village or other municipality in which such garage or repairshop is located, also after five days notice of such sale posted in five of the most public places in such municipality and the proceeds of such sale shall

be applied to the payment of such lien and the expenses of such sale, and the balance, if any, remaining shall be paid to the owner of such property or his representatives. If such balance be not claimed by such owner within sixty days after such sale, then the balance shall be paid over to the overseer of the poor of such municipality for the support of the poor.

## You Lose

Editor Motor World: Please advise us as owner of a garage, in reference to the New York Lien Law, which does not seem clear to us.

This man owned an Overland six car; he purchased considerable supplies from us, tires, tube, gasoline, repairs, oil, etc. He has taken this car out of our garage and traded it in for another car. He put the new car in his wife's name. He has nothing, no property, or money. We could probably get a judgment, but nothing more.

The Overland six, he traded in, is in our garage, owned by the man he traded with.

What we would like to know is: Can we lawfully lien this car owned by the other man and make it holding on original owner—the man who owes us a bill?

Can we lawfully lien a car after the car has gone out of our garage, changes hands, and returns to our garage again?—Elmira Motor Car Co., 106-10 East Church Street, Elmira, N. Y.

Answer—Your lien simply attaches to a car while in your possession. When you give up possession of the car, you give up your lien.

You cannot hold a man's car for a bill owed by a person from whom he bought it, nor can you hold the new owner responsible for the old debt.

## Motorcycle Defined

The word "motorcycle" was recently held by the courts to mean a bicycle propelled by a gasoline engine located in the frame between the wheels.

A "clutch" was held by the same court to be a device introduced in the transmission, some place between the mechanism in which power is created and the mechanism to which it is applied, and serves to make and break the connection between the two. (Ellett vs. Klein, 252 Fed. Rep., page 805, Penn.)

# Winter Business

Have You  
Started Yet?  
If Not—  
WHEN?

## See This Window?

Well—Here's an Idea—

**T**HIS display appeared last Washington's Birthday in the windows of Goodyear dealers. There are several holidays just ahead, including Washington's birthday.

Therefore, put this display in your windows. If you use it the week of New Year's, put an hour glass or Father Time and the New Year in the central picture.

If you use it Valentine's Day, put Cupid in the central picture.

Use the general layout as shown, and then fill in to a reasonable degree—don't crowd—with whatever accessories are seasonable at the time you use the window.

And at the same time send out a letter to your customers, recommending their use of some seasonable accessory.

Keep plugging along on this basis, and you'll be surprised how your Winter Business will bring profits.

### Here's A Sedan Idea

**S**EDANS are scarce in the Metropolitan territory. But there is no scarcity with the Cutting-Larson Co., New York, Oldsmobile distributor. Some time ago C. H. Larson, head of the business, saw the scarcity coming and acted accordingly.

He sent his emissaries out scouting for sedan bodies. Here and there he picked up two or three or a dozen, and right now he is dickering with a man in a far city for a bunch of twenty-four. They were built by a body building concern of national reputation for a manufacturer who could not finish enough chassis to carry them. So Larson may get them.

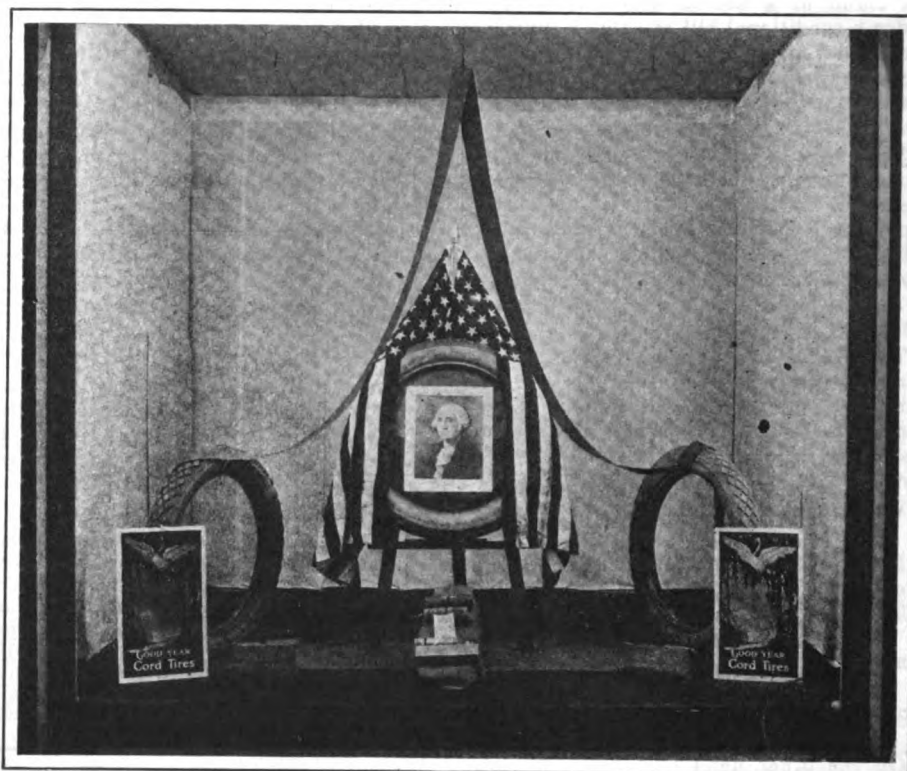
And if he gets them he will mount them on Oldsmobile chassis, or on any

other chassis which he has or which he can pick up at the right price. Picking things up at the right price is really the secret of Larson's success. He takes used cars in at the right price with a view to scrapping the bodies and fitting new or rebuilt sedan or coupe bodies to them. And on the deal he nets a neat profit.

The same thing might be done by almost any other dealer in any city. At the present time a great many body builders are pretty well stocked with sedan and coupe bodies, built for car makers who had to cut down production and who cannot use the bodies. In many cases they can be picked up cheap. It's not much of a job for a good workman to fit a sedan or a coupe body to practically any chassis which is somewhere near the proper size.

This is a good way to get rid of a flock of used cars that won't move right now because they are open cars. Turn them into enclosed cars.

And get WINTER BUSINESS.



### Here's A Garage Heater Letter

*Sent It to Your Prospect List*

Does your garage get cold and frosty these days?

And does that make your motor start hard?

And do you have to drain the radiator and watch it carefully to see that it doesn't freeze.

And when you want to work in the garage—as we all do—do your fingers get cold and the tools feel like ice?

You can make your garage comfortable and warm, so you can work with your coat off. You can protect your car from all the troubles of cold.

Enclosed is a booklet that tells about the Blank Garage Heater, but it can't begin to tell what you yourself could see if you examined this personally. On the enclosed card give the dimensions of your garage and we'll be glad to send you information as to what a heater installation would consist of for your garage.

# These Letters Will Bring Business

*If You Will Mail Them to Your Prospect List*

## Car Repair Letter

Running a car season after season without having it touched by a skilled mechanic is often considered a point of great merit in the car. But generally, cars that aren't looked after once a year go to pieces all of a sudden some day and the owner can't understand why.

The reason is that the car was full of little bits of trouble all the time. They kept accumulating, but didn't affect the car's operation. Then all of a sudden they all grew big at once—and the end came.

Every season, especially one such as we have just had, your car should be looked over and at least tuned up.

It is our suggestion that you bring it to our shop, let our mechanics inspect it and advise you as to its condition.

Incidentally, we can give you better service NOW than later, because we are right between the summer and spring rushes. We have plenty of time and room to handle your work.

Drive down any day.

## Anti-Freeze Letter

Suppose, last summer, your wife left a pound of butter—worth its weight in gold—out where it could melt overnight. Would you call that extravagance and waste?

Suppose, this winter, you leave your car in the cold overnight, where it will freeze and burst the radiator. Will that be extravagance and waste?

Of course, your wife always placed the butter in the ice box. AND, OF COURSE, YOU WILL NOT ALLOW YOUR CAR TO FREEZE.

AND IT WILL NOT FREEZE IF YOU USE OUR ANTI-FREEZE SOLUTION. It's cheap and it works. 60 cents a quart. Merely mix it with the water in your radiator. It does the rest.

Stop in to-day. To-night may be below zero.

## Primer Letter

The last thing you want to do these cold mornings is the first thing that you really do when you leave your warm, comfortable home—enter your freezing garage, remove your heavy gloves, hunt up a cup of gas, take off the tight spark plugs and prime the cold cylinders.

BUT YOU DON'T HAVE TO DO IT. The EVERREADY Primer—small, cheap, handsome, at \$1.25, installed free—will shoot the gas into the cylinders while you SIT AT THE SEAT.

All you do is turn a lever—no trouble, no cold, no discomfort.

Step hard on the brakes as you pass our store. We'll install the outfit for you in fifteen minutes. Our mechanic will be waiting for you TO-DAY.

## Radiator Cover Letter

A piece of paper stuck on the front of your radiator is, in a way, a means of keeping your motor warm, but it isn't very sightly, is it? And neither is it very efficient. A real radiator cover is far better.

Our covers—and we have a full stock for all cars—are made to fit perfectly and are of heavy leather, wool lined. They have a simple strap and clasp arrangement so that you can roll up the front whenever the weather permits.

Prices are \$2.50 for the radiator cover, or \$4 for the complete radiator and hood cover.

You will like our service. No need to step out of your warm, comfortable car. No discomfort. No time lost. Merely shut off the gas, step on your brakes and "toot" as you reach our store. Our cover expert will come out, ask your desires, measure your needs, fetch the cover and adjust it securely.

Better stop and "toot" TO-DAY. To-morrow may be below zero.

## Repainting Letter No. 1

Do you want to add \$100 or \$200 to the value of your car?

Do you want to bring the car back to its youthful appearance?

Do you want a new car without paying for a new car?

Painting and fixing up a car costs between \$20 and \$50, depending on the car and its condition.

And the value of the car increases far in excess of what it costs to fix it up.

Right now is a fine time to have this work done. You have days when you are not using the car and we have more time in our shop now that the rush of summer business has gone.

Will you do this? Drop the enclosed card in the mail and ask our paint man to look at your car and give you an estimate on the work. There is no obligation attached.

## Truck Letter No. 1

You can drive a horse all day, but you can make him do only so much work. He has his limitations. At night he's through. He can't do any more. And all day long he can go only so fast.

A motor truck is limited, but not by its endurance powers. It can run hours at a time and go faster the last hour than it did the first hour. It never balks because of the load.

A truck can carry more than horses, can carry it farther and faster, can handle it better and cheaper, and it doesn't eat when it doesn't work.

Have you considered what a truck could do in YOUR business?

Don't you think you ought to con-

sider this possible economy in these trying times of reconstruction and changing conditions?

To investigate will cost you nothing. Figuring with business men on business costs is our specialty, and we charge nothing for this consulting service.

Return the enclosed card and we shall be pleased to call on you with all the information at our disposal.

## Trailer Letter No. 1

Did you ever stop to consider that it isn't necessary to have an expensive motor truck or motor delivery wagon in order to carry things around town?

Did it ever occur to you that a regular motor car that is used for touring Sundays can do this work just as well as a delivery wagon and without harming the automobile—on one condition?

That condition is that you provide the car with a Blank Trailer.

The Blank Trailer is quickly and easily hitched on behind any car. It will carry a load up to a half ton. It saves the car from ruin through being used as a truck and gives the car owner both a car and a truck for a fraction of the cost of both.

Inclosed is a booklet telling about the Blank Trailer. You will find it worth your while investigating.

Telephone some morning and let us show you how easy a Blank Trailer can carry a load for you. We'll carry a load for you free and you won't be under any obligation either.

## Vulcanizing Letter No. 1

I know what car you drive and where you keep it. Also, I know your business telephone number. And on the first day snow prevents driving I am going to telephone to you for permission to

- 1—Go to your garage.
- 2—Take off your tires.
- 3—Take them to my shop.
- 4—Examine them.
- 5—Repair all necessary tube and casing injuries.
- 6—Install reliners where essential.
- and
- 7—Return the tires to the wheels of your car.

This service is free, and the repairs cost only the regular price—which is reasonable.

The reliners are guaranteed for 1500 miles. If your tires don't run that far I'll sell you a new tire less the cost of the reliner—which tells you my opinion of my reliners.

All you need do is to say yes when I telephone. Or, better still, drive the car in the first day you don't need it and let us prepare you against future tire trouble.

# The To-Morrow of TO-DAY Is Yesterday

By RAY W. SHERMAN

HENRY BENNETT, who sold the Redman car in and about Callawassa, was pawing over his prospect files of a year ago and making notes on a sheet of paper. Now and then he paused with a card in midair and either smiled or scowled, according to the recollections that were brought back.

He was very, very busy—or thought he was—when Reilly, who used to pitch to Henry in the old sand-lot days, brought in his green velour hat and laid it in Henry's out-going mail basket. Reilly, who sold the Sennett, always used the out-going basket for his hat when calling on Henry. His cigar ashes he always flicked into the waste basket, whence they filtered through onto the floor and left the porter that much farther from a chance in a golden hereafter.

"What ho? Henry! What ho?"

"Just digging around a bit—getting ready for some business some day," replied the Redman dealer, carefully putting the last card back whence he had picked it and marking the place in the file with the cover of a paste pot.

"How's it look to you?" and Reilly dumped ashes No. 1 in the waste basket.

Henry looked at the waste basket.

"How's business look?" Reilly corrected himself.

"Doesn't look—yet," said Henry. "Not much to look at so far."

"Not picking up much, eh?"

"How's it with you?"

"Oh," said Reilly, "it's coming fairly well. I'm getting out from under some of this last summer's stock that I thought I was going to need next spring. I think we'll be getting some cars from the factory in a short time."

"Don't see how you unload 'em," declared the Redman dealer. "I can't."

"We just go out and sell 'em," said Reilly, caressing the velour hat. "We've had a sales campaign on since the day after the sales force recovered from the second peace celebration."

"I'm going to start one as soon as things seem to liven up a bit," Henry explained. "I've got a few cars in stock, of course. I guess we all have. But selling hasn't really picked up yet. Also, I suppose later on we'll be getting some new models from the factory, and I'm sort of waiting to see what's going to happen."

"Want to know what'll happen?" challenged Reilly.

"Yes, I do! What?"

"You'll lose a lot of money this coming year if you don't watch out!"

"What do you mean? Lose a lot of money? How?"

"Mostly by not making it," said Reilly. "You aren't making any money now—and you admit it. What I'd like to ask is when you're going to start making some."

"Well—"

"Henry, did you ever stop to think that it might help you if you would put some of this dreaming of yours on paper? Take this particular case: When are you going to start to sell cars? To-day is the eighteenth of December. The armistice has been in effect—let's see—thirty-seven days. During those thirty-seven days the cloud of war has been off the buying power of Callawassa. There has been a clear path for you to get back to selling. But you haven't gone."

"If the eighteenth of December is not the right day on which to begin to sell cars, what is the day? Is it the nineteenth, the twentieth, the twenty-first, the second of January, the tenth—or when?"

"Oh, well," defended Henry, "that's not the problem. That isn't the way to go at it!"

"What is the way then? When are you going to begin?"

"You can't go at it that way, Reilly! I tell you that's no sane way to figure! I'm going to begin, when—I'm—I'll—"

"Just what I thought," Reilly interrupted. "You haven't any intelligent idea on the subject except what NOT to do. You're in a negative frame of mind. You haven't a single positive idea. You're all the time talking of next spring, next February, next January, to-morrow—any time except to-day."

"Ever since you have been in business, Henry, you have been tailing along at the end of the parade. You haven't been a leader in a single thing. And it's all because you're always waiting for a good time to do something. Did it ever occur to you that the man who gets up in the morning and then waits for a good time to start his day's work never gets much done? The man who has something accomplished by nightfall is the man who begins early in the morning, regardless of the weather and other conditions, and plugs right straight through until quit-

ting time. He may not accomplish as much during the early hours as he does later in the day—but it all piles up a big result."

"You have been sitting around here waiting for—waiting for—waiting for what? If you know what you're waiting for I wish you'd tell me—but you needn't try, for you don't know. You're like the guy that says: 'I'll bet you!' 'Bet me how much?' 'Oh, nothing. I'll just bet you.' And that's you. You're waiting. Waiting for what? Oh, nothing. You're just waiting."

"What you want to do, Henry, is get this war thing off your mind and get out from under the habit of waiting that's settled upon a lot of us during the time the war made certain activities impossible."

"We all talk about resuming activities—and then we talk about how and when to do it. Well, Henry, to paraphrase Horace Greeley, the way to resume is to resume. There's no need for wondering how or when or what. Just start right away in the same way you used to do things."

"And we have all heard a lot about the new business, and the different conditions, and all those things, until we have acquired an idea that some morning we're going to wake up in a new world, with new people, new methods, new atmosphere, new cars, new buyers and new everything and the morning newspapers carrying a front page story to the effect that the new day has arrived."

"That's all very fine, Henry, with the one exception that the new day and the new conditions and the new business arrived a long time ago. What you're looking for to-morrow happened yesterday. You're waiting for something that will never come. The new business is nothing but sense and aggression and push—and if you didn't have it on the eleventh of November you haven't got it now—and you won't have it to-morrow—unless you go after it to-day."

"The start on the new business that you're going to make to-morrow should have been made last week. The cars you're going to sell to-morrow won't pay to-day's rent. The only time you have to start is to-day. To-morrow is something that is as dead and useless as something that's gone far by. It's—it's—why, Henry, the to-morrow of to-day is yesterday."

A Department of

# BETTER MECHANICS

No. 92

## Overhauling the Stewart Vacuum Tank

By J. HOWARD PILE

**M**ANY times faults laid to the carbureter are caused by failure of the vacuum tank to function properly. The two things that are most liable to be the trouble are clogging and flooding.

1—To test, open the drain cock under the tank or disconnect the gasoline line below the tank. If any considerable amount of gasoline comes out, it may be concluded that there is no stoppage and that the tank is properly performing its operations.

2—The flapper valve may not seat. This is a condition often found when the car has not been used for some time and the valve dries up. To correct this, remove the pipe plug from the top of the tank and pour in about  $\frac{1}{2}$  pint of gasoline. This will wash any sediment off the flapper valve so that it will seat properly.

### To Clean the Valve

1—Disconnect the gasoline line leading to the carbureter.

2—Drain the tank.

3—Hold a finger over this tube and over the vent tube. If a continuous suction is felt through either tube when the engine is operated or turned over with the throttle shut, this may be taken as an indication that the flapper valve is not seating properly and that air is admitted to the upper chamber from the reservoir through the flapper valve.

4—Remove the eight cover-retaining screws.

5—Remove the vacuum chamber.

6—Remove the head.

7—Take out the two small retaining screws and spacers that hold the flapper valve.

8—Take out the flapper valve.

9—To clean the valve, hold it on one finger as shown in Fig. 3.

10—Remove any collection of dirt or carbon that may be on the surface with a very smooth flat file. Do not use sandpaper or emery paper as this has a tendency to make the seat irregular. With a very light pressure on the valve, the file may be pushed across it in one direction, the valve turned through a

fraction of a turn and the operation repeated. Inspection will disclose the nature of the seat.

11—If there is any collection of dirt on the seat upon which the flapper valve seats, this should be removed in the same manner, but extreme care should be used

to leave the surface perfectly flat and smooth.

### When the Tank Floods

1—Flooding of the tank is caused by a leaky float. It causes excessive gasoline consumption and loading of the engine at nearly all speeds.

2—To remedy this defect, remove the eight top retaining screws.

3—Remove the top casting of the tank alone.

4—Immerse the float in hot water to detect the leaks. Bubbles will indicate the escape of air.

5—Punch a hole in the top of the float and one in the bottom.

6—Drain all the gasoline out through these holes.

7—Solder up these holes and also the original leak.

8—Do not use too much solder or the weight of the float will be materially increased and this will interfere with proper float action.

9—Test the float again in hot water after soldering.

### Watch These Things

1—See that the cork gaskets at the top of the tank are not damaged on the removal of the head or vacuum chamber. These are put on with shellac and if they are cracked loose they should be coated with new shellac before being installed. If they are broken they should be replaced with new perfect gaskets.

2—Proper operation of the toggle-operated valves is essential. Check their operation when the head is removed. If the levers are bent or the spring is broken, replacements should be made with new parts. The two valves should seat perfectly.

3—The tanks should be cleaned periodically by putting gasoline in at the top after opening the drain cock or disconnecting the gasoline line to the carbureter. This will flush out any sediment that may have collected in the bottom.

4—If the vent tube regularly overflows, the air hole in the main gasoline tank filler cap may be too small or it may be

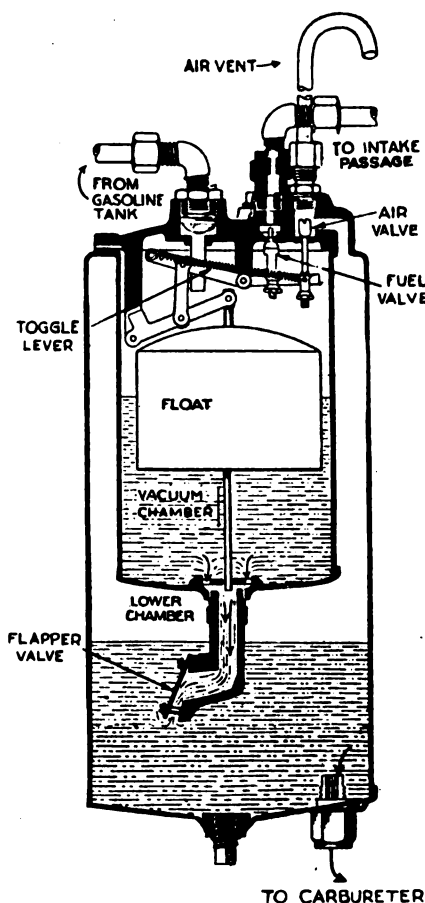


Fig. 1—Cross section of the Stewart Vacuum Tank with the operating parts marked. The toggle mechanism snaps the two valves open or shut as the case may be



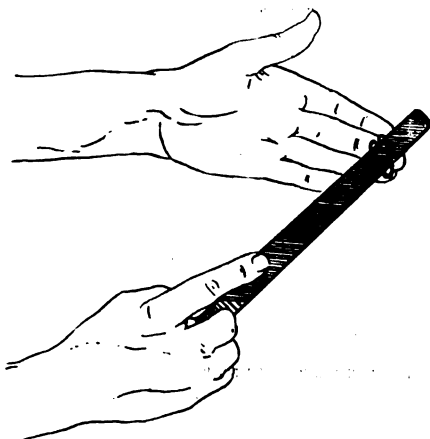


Fig. 3—Cleaning the flapper valve with a fine file

stopped up. If the hole is too small or if there is no hole at all, the system will not work. Enlarge the hole to  $\frac{1}{8}$  in. diameter or clean it out.

5—The fact that a small amount of gasoline escapes from the tube once in a long time does not indicate any derangement and no adjustment is needed.

6—Overflow through the tube may also be caused by the tank being too close to a hot engine or hot exhaust pipe. This can be remedied by changing the position of the tank. If it is impossible to place the vacuum tank high enough to prevent overflow, this may be remedied by attaching a length of tubing to the vent connection, and carrying it up to the highest point under the hood as shown in Fig. 4.

## NEXT WEEK

Complete report of Convention of National Association of Automobile Accessory Jobbers

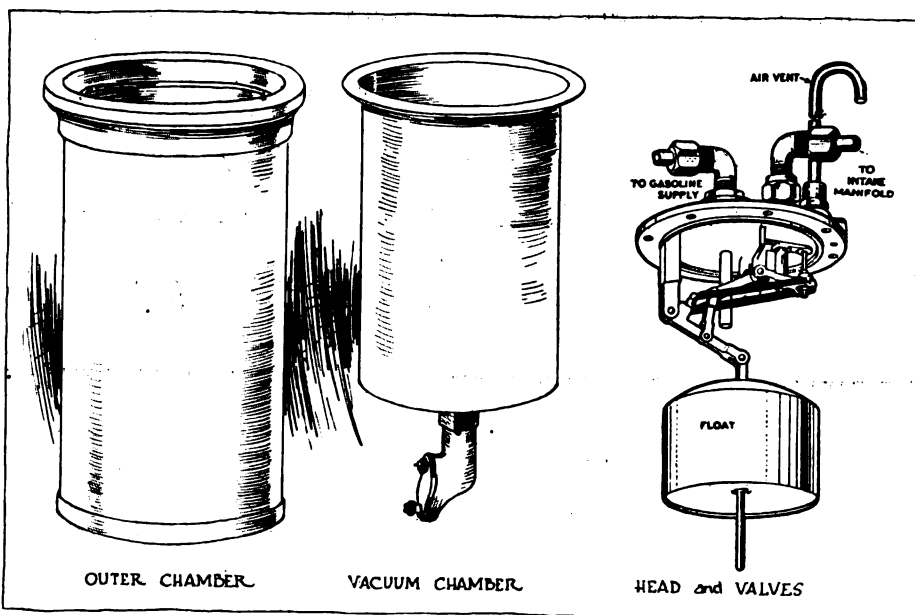


Fig. 2—The three units of the tank as they appear after separating them

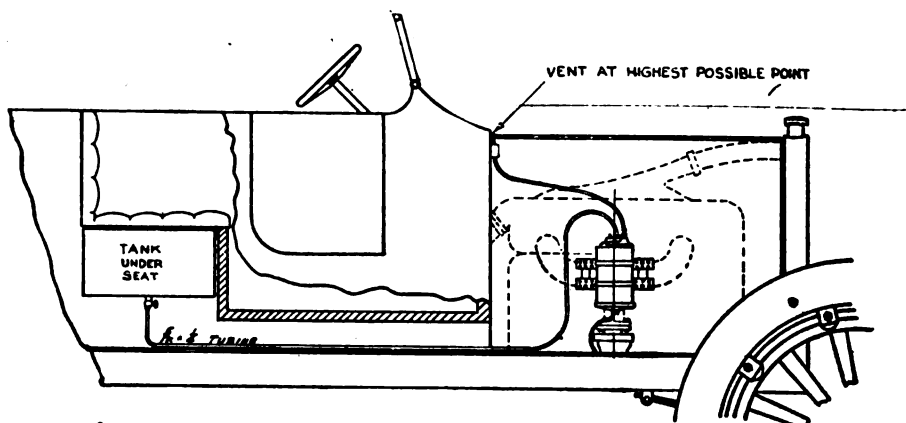


Fig. 4—If the tank habitually floods run a tube from the vent to a high point under the hood

# SHOOTING TROUBLES

## Care of Tires

Editor Motor World: We would like to have your advice on the care of tires during the different seasons of the year. For instance, what special care should be given tires during the winter, spring, hot summer months, etc.—A. F. C.

Reply—For convenience and because these points have been covered so many times in print and in makers' instructions, we have grouped the points and covered them very briefly.

### Throughout the Year

1—Keep tires and tubes out of light as much as possible, especially sunlight, as the light makes checks and cracks in the rubber and makes it hard.

2—Keep tires and tubes away from oil, grease, kerosene, etc., as this softens the rubber and rots it.

3—Protect the fabric from water, dirt

and moisture by filling up tread cuts and punctures.

4—Keep rust from rims by painting them with graphite or stove polish. Rust weakens the beads and the grit formed chafes the tubes.

5—Drive carefully and avoid car tracks, glass, tacks, sharp stones, tar and other material likely to damage or cut the casings. Avoid sudden brake applications as these file off the tread on the rough road.

6—Keep the tires inflated to their proper pressure, 20 lb. per inch of section.

7—Do not overload the tires.

8—Use tires large enough for the weight carried.

9—Keep stock tubes from chafing when they are carried in the car. Tie them up and wrap tightly in a bag or box.

## Winter.

1—Avoid sharp ice, frozen snow and frozen dirt and stones if possible as these cut the casings.

2—When storing a tire, remove it from the rim, clean off all the dirt, grease, etc., and put the tube in the casing, inflating the tube just enough to give the casing its proper shape. Wrap with paper to exclude light and keep in a dry place at moderate temperature. Keep away from coal gas and other fumes.

3—If the tire is to remain on the rim, clean off the dirt and grease as before, deflate to about 10 or 15 lb. pressure and raise the car onto jacks or horses till the tires are clear of the floor.

4—Do not allow the car to stand in a pool of water or mud when it is freezing weather, or the tire will be frozen in.

## Summer

1—Keep the tires out of the sun. Always stop the car in a shady place or shield it from the sun.

2—Over-inflation from heat generated by driving is a bogey that need not be worried about.—EDITOR.

# What the War Means

## TO THE SERVICE STATION

*Two Men Will Return from the Army for Every Man Who Went In—  
Unskilled Men Have Been Made Skilled Workers*

**T**HE war means more and better mechanics. It means that giving service should be easier and more profitable than ever before.

To learn in just what ways the creation of our great war organization will affect the automotive trade as demobilization begins Motor World asked George E. Randles, in charge of the Maintenance Division of the Motor Transport Corps, at Washington, for his views on the subject.

Before the war Randles was connected with a large Cleveland company making high-grade machinery. He knows mechanics from the mechanical and personal sides.

He states that new methods have been created, lower costs have been made possible, better workmanship has been taught, mechanics have been educated and there was built for war purposes a great army of mechanics who will fit wonderfully well into the automotive trade as it organizes for peace.

### Manufacturing Applied to Maintenance

"The large quantities of motor vehicles to be maintained in the army," says Randles, "made possible a plan of modern manufacturing applied to maintenance; and there has been developed and put in operation a plan of maintenance which is accomplishing this purpose, as seen in the Standardized Repair Unit.

"Due to the tremendous growth of the automobile industry in the years before the war, a sufficient number of skilled mechanics were not available to meet any conditions, and this necessitated the training of men.

"These men, on being enlisted and assigned to one of our large base shops, immediately started intensive training under the direction and tutelage of officers who in civil life were among the best motor men in existence.

"Every job was understudied and a journeyman and apprentice assigned to each. Under such conditions, apprentices who otherwise would never have been real mechanics have learned the basic principles and construction of the modern motor car. This is nothing more

than has been done in England and France, sometimes referred to as 'diluting labor.' They have been trained to start on time, to work hard all day and to quit only when ordered.

"In certain branches of the maintenance work it was found that schools of instruction were needed. For example, the corps was so short of welders that welder schools were started, and in a short time students were turned out skilled in the treatment of metals.

"In the Standardized Repair Unit the vehicle received a complete rebuild in all of its parts, including engine, transmission, body, upholstery, electrical apparatus, etc., and when finished, barring crystallization of some parts not replaced, it has at least the original number of—and in many cases more—miles in it than when new.

### Rebuilding Is Thorough

"THE WORK OF REBUILDING IS THOROUGH; NOTHING IS TAKEN FOR GRANTED. Each and every unit is taken out and sent to its respective department, where it is taken completely apart, thoroughly cleaned, from which it passes to the first inspection, where it is either rejected as of no further use or an operation is prescribed to make it as good as new, and the human element is largely eliminated here, as limits are prescribed beyond which the inspector is not permitted to go in passing for use again, and there is a further rule as to whether to scrap or remachine.

"As an example: If a cylinder bore is found to be out of round or tapered beyond a certain limit then it must be reground, and the oversize is prescribed in the manual, which is standard, and this automatically requisitions from the spare parts reserve a piston properly made and finished by the manufacturer.

"Crankshafts are treated in the same way. Main bearings in the crankcase are all line bored to eliminate the distortion which takes place from use. The surface of same for cylinder blocks are all made parallel before this operation. All parts are carefully inspected first for defects and wear and, after they are repaired, together with the new parts which come from the stockroom, they are again inspected before going to sub- and final assembly. Inspection at regular periods through the assembly of the different units and the complete vehicle are made, which is also prescribed in the manual.

"The work from the time the vehicle

reaches the dead line until it passes through its process of rebuilding is on the progressive system. In fact, in this plan modern manufacture is applied to repair work, which results in low cost, large production, using unskilled or specialized labor, and at least the original number of miles built back into the truck.

"In the Service Park Unit, which takes care of the ordinary running repairs, provision as to tools, equipment and instructions has been made to prevent an attempt to make repairs that should be done in the Repair Unit.

"So, although the automobile industry has passed through the period of labor shortage, it should be most gratifying to all concerned to know that when our army demobilizes there will return to civil life two skilled automobile mechanics for every one that was taken away, and for every heavy truck driver three men will return to take up the work of keeping for America her place as a world leader in automobile engineering and operation.

"The Motor Transport Corps, since its birth some months ago, has done some wonderful work. Possibly the greatest single effort and effect was the induction of some 49,000 men for maintenance work in thirty days.

### Demobilization to Be Done Judiciously

"The sudden ending of hostilities has naturally checked the growth of all staff corps, and one of the most important problems facing our Government is the gradual return of our men to take up their every-day work. This is to be accomplished in such a manner as to prevent disruption of labor conditions.

"There is another effect which undoubtedly will give great impetus to the growth of the motor car business, namely, the close co-operation which has come about between the officers of the U. S. Army and Navy and the great organization known as the Society of Automotive Engineers. Without this harmony it would have been impossible to have so quickly organized, procured and maintained the Motor Transport Service of our army. When it is realized that the Motor Transport Corps has in this country 1,336 officers and 44,292 enlisted men, and overseas 1,725 officers and 62,064 enlisted men, who are thoroughly skilled in maintaining and operating automobiles, it will readily be seen that the automobile business will profit tremendously through this large increase and improvement in grade of personnel."

# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1636—PLUG FOR GASOLINE TANK

A plug to replace the filler cap of a gasoline tank is made from a piece of solid rubber cut to the correct diameter and from 1½ to 2 in. thick. A hole is bored through the center of this and a bolt goes through the hole. When the nut is tightened up, the rubber is forced outward to catch the threads of the filler neck. If the feed is by gravity or vacuum, a hole will have to be drilled through the bolt to admit the air. If it is a pressure system no hole must be drilled.—Charles R. Maranville, Snyder's Garage, Mannington, W. Va.

## No. 1637—SPOTLIGHT FOR A SERVICE CAR

A spotlight to be mounted on the runningboard of a service car is made by mounting a Ford or other headlamp in pipe fittings. The upright is ¾-in. pipe and the lower end is threaded into a floor flange which is screwed onto the runningboard. A swivel joint at the top and a hinge joint just below will allow universal motion of the lamp. If the handle in the swivel joint is threaded to screw into the joint, the lamp can be locked in any position.—H. A. Schweibold, Peoria, Ill.

## No. 1638—CUTTING WOOD BATTERY SEPARATORS

A trimming board such as can be purchased at most any stationery store makes a good device to cut wood separators for storage batteries. The squares laid off on the board act as guides to cut the pieces all alike and the ruler at the top serves to check up the measurement and to insure that the cut is taken at right angles.—Fred L. Gray, Jewell, Kan.

## No. 1639—AUTOMATIC CLOCK TIMER FOR VULCANIZING

This is an automatic alarm to notify the man in the shop when the cure is finished in any one of a number of vulcanizers. The minute hand of the clock has a piece of spring wire fastened to the end so that this wire extends out a bit beyond the dial of the clock. A wood rim surrounds the clock and this rim is drilled with 12 holes large enough to take 10-penny nails. When a nail is put in one of the holes, the wire on the minute hand makes contact as it reaches the point. A strip of metal on the wood

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

1—Describe the shortcut briefly but clearly, in few words.

2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.

3—Write on ONE side of the paper only.

4—Sign your name and initials, the name of the company you are with, and the town.

Write plainly. If your name is unusual, print it in capital letters.

rim connects the nails in the circuit. The bell and battery are wired so that one wire is grounded on the clock and the other on the metal rim that holds the nails. The heads of the nails are numbered to correspond with the numbers of the vulcanizers, so when the bell rings and it is found that the contact is on No. 5 nail, that means the cure in No. 5 vulcanizer is complete.—Mrs. Harry Crain, Elk Auto Supply Co., El Paso, Tex.

## No. 1640—SELF-CENTERING PISTON JIG

This is a self-aligning piston jig to swing a piston in a lathe. It is preferable to chucking because it is quicker, and, especially, because many pistons are not strong enough to be chucked. The tool consists of a lathe center with a disk mounted on the end, the disk being just the diameter of the piston, and it is grooved so that the skirt of the piston fits nicely into it. The piston is held snugly in place by an eye which screws into the center of the tool and which has a small cross piece passing through its eye and resting in the wristpin bosses.

It only takes an instant to put the piston in place and the strain of turning tends to screw it tighter.—L. Russell, Cadillac Auto Co., Boston.

## No. 1641—STUDEBAKER CLUTCH-SPRING REPLACER

A Studebaker clutch spring is replaced with the aid of a gear puller and a piece of tire iron bent into a U-shape. The ends of the U-shaped piece are filed off square and a hole started with a drill in the center of the top part for the point of the gear puller to catch in. The spring is then depressed with the screw of the gear puller.—C. L. Woodside, Crowell Auto Co., Roxboro, N. C.

## No. 1642—ARMATURE TESTER

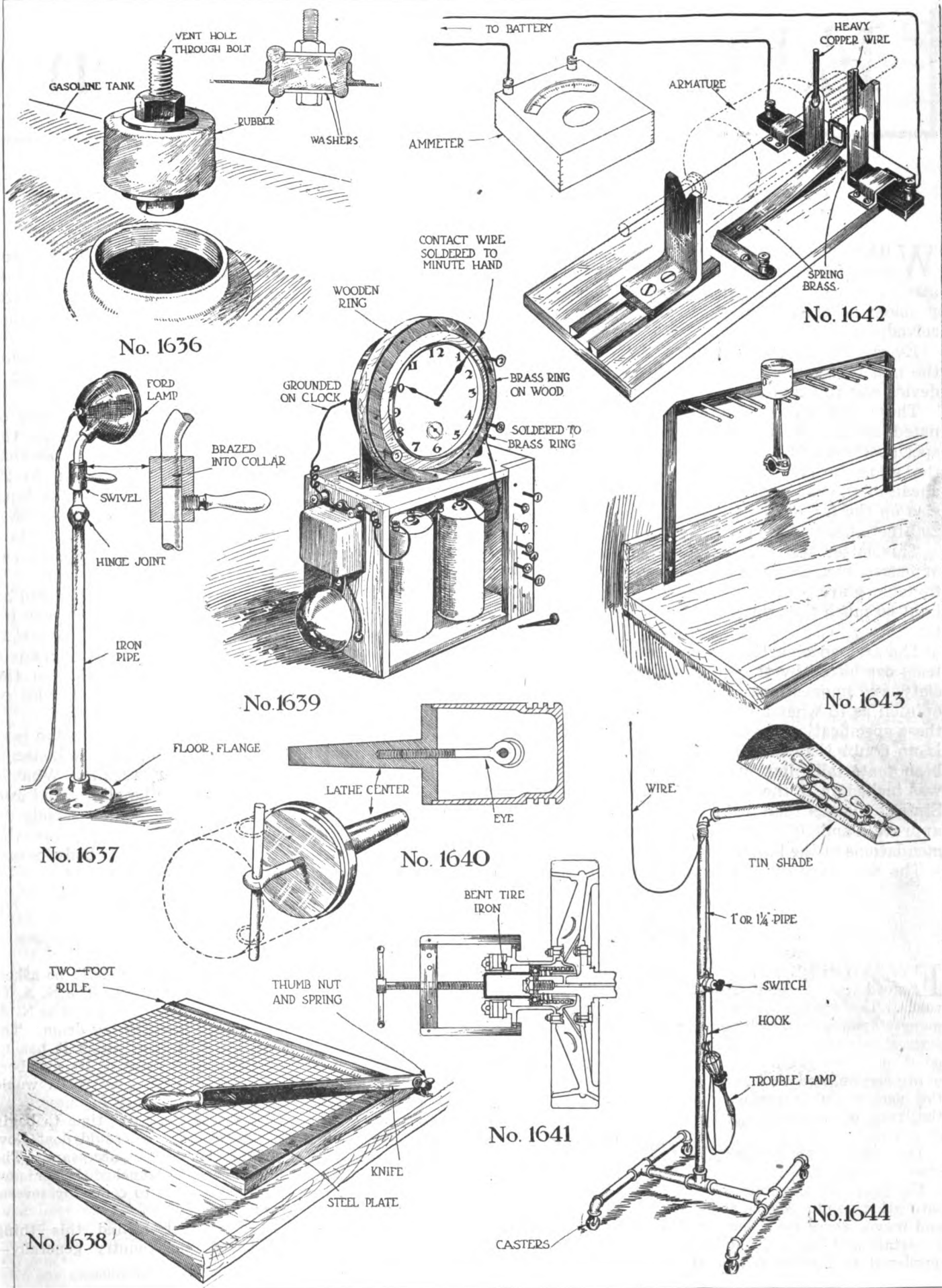
A device to test faulty armatures is made so that the armature is supported on two V-supports, one of which is movable to accommodate different lengths. Spring connections press against both sides of the commutator to make the test connection, and these connections are put in series with a battery and ammeter. As the armature is rotated any noticeable deflection will indicate a defective winding. A third contact is spring contacted for armatures with brushes 90 deg. apart. Each connection is provided with a binding post.—H. L. Hawthorn, Des Moines, Iowa.

## No. 1643—RACK FOR PISTON ASSEMBLIES

This is a rack to be placed at the back of the bench to hold piston assemblies during the time that other repairs are being conducted on the engine. It is made of a strip of iron ¾ x 1¼ in. with pegs inserted in pairs for holding the pistons, the connecting-rod assemblies hanging through the pegs.—L. Russell, Cadillac Auto Co., Boston.

## No. 1644—PORTABLE WASH LAMP

A portable lamp for general garage use or for the wash rack is made up of standard pipe fittings. The wiring is fished through the pipe so that the pipe acts as conduit and protects the wires. The stand is mounted on castors and the reflector is made of bright tin. The switch is on the upright pillar and an additional portable bulb is connected into the line. Four lamps will be found to give ample light for working within 10 ft. of the lamp.—Sebastian Frye, Frye's Garage, Ironton, Wis.



# Editorial Observation

## New York's Glare Control Law

**W**HEN New York State adopted a set of specifications for making tests of headlamp illumination about six months ago, it was hoped that the vexing problem of glare control had at last been definitely solved.

Every maker of glare control devices who wanted the seal of approval of the state authorities for his device was to submit it for test.

These tests were to be made in laboratories designated by the Secretary of State, according to the specifications laid down, and were to bear not only on the glare in two different positions, viz., directly ahead of the car and to one side close to the car, but also on the intensity of illumination at a distance of 200 feet ahead of the car.

This latter test was specified so that the makers of lenses, etc., in their eagerness to eliminate objectionable glare, could not reduce the beam of useful light so much that the light would be unsafe to drive by.

The test specifications were based upon extensive tests conducted by the Illuminating Engineering Society, and unquestionably represent the best available opinion as to what a set of headlamps should do. If these specifications had been rigidly adhered to, there is no doubt that the headlight situation would have been materially improved. Unfortunately, a clause was tacked on to the law permitting the Secretary of State to make a road test of devices submitted for his approval, and, if he chose, to set aside the recommendations of the laboratory having tested the device.

The Secretary of State has made extensive use of

the powers conferred upon him by this clause, and apparently has approved every device submitted to him so far. At any rate, he has practically disregarded the recommendations of the laboratories in a number of instances. In the case of a certain lens, the laboratory found it would meet the requirements of the law with respect to glare only if used with a bulb of not over 7 candlepower.

With such a low candlepower, and the property of the lens in question, of diffusing the rays of light, the road illumination would be intolerably poor, so that the Secretary of State ruled that bulbs up to 24 candlepower could be used with this particular lens. In the case of another lens, the laboratory found that 5 candlepower was the maximum tolerable if glare was to be avoided, but the Secretary of State set the limit at 17 candlepower.

It is quite evident that these two devices, judged by the standard of the state's specifications, are very inefficient, and should have been ruled out if the law is to mean anything. But the Secretary of State made a ruling which, according to the best opinion in the illuminating field to-day, will make legal the use of headlamp devices producing intolerable glare.

As the law stands, it leaves everything to the personal judgment of one man, which, in this instance at least, does not lead to satisfactory results. What is needed is that the road test clause be eliminated and approval or disapproval be made dependent solely on rigidly specified laboratory tests. Only so can the personal element be eliminated and everybody be assured of a square deal.

## Get Behind Good Roads

**E**VERYWHERE you go you hear good roads, good roads, good roads. The subject is discussed from many standpoints and there are many suggestions made. But there is one point on which there seems little need of discussion, and that is as to what the dealer and garageman and all the rest of the automotive people should do.

They should get behind the good roads movement.

For years we have talked about the saturation point. Maybe there is one and maybe there isn't, but one thing is certain and that is if our roads are developed as they should be the sat-

uration point will be so far away that some of us will get gray-headed—or more bald than we are now—waiting for it to be reached.

There are thousands and thousands of homes in the United States that are without cars because the only suitable driving space for miles is in the front yards. The roads are impassable. There can be used thousands of trucks and the development of farms through roads will mean the sale of tractors. There isn't a corner of this great industry that won't be benefited by good roads. So get behind the movement.

Every association should look into

the matter, and not wait to be asked, but see what it can do. The N. A. D. A. should head the parade. The N. A. C. C. should beat the big drum. The N. A. A. A. J. may think it has no call, but maybe some of its members little realize what good roads would mean to the accessory business.

We are at the right time to begin this movement. We could float Government bonds if necessary. The project can be launched better now than at any time to come for several years.

Let's all get behind this thing and benefit the country generally—and ourselves.



# LETTERS *from* READERS

## *Stabilize Prices*

*Editor MOTOR WORLD:* One of the greatest problems confronting the automobile dealers to-day is the decreasing of prices. The expectation of prices gradually decreasing has brought the retailing of automobiles to a standstill. As a remedy for the condition we would suggest the automobile manufacturers get together and set one price which is to stand unchanged for the full season of 1919, or otherwise set some price as a minimum for the coming season. The wide publication of this will no doubt establish the confidence of the prospective purchaser.—PACHECO AUTO CO., INC., Oakland, Cal.

### Enters Rural Motor Express

*Editor Motor World:* We are enclosing a photograph of the Midland truck which is being used for express and freight hauling over the Ozark Trail. It is at present making a trip from Oklahoma City to Wellington, Texas, a distance of 196 miles, making same on a schedule of two days each way, hauling express and freight.

This is the first of a large number of Midland trucks which will operate over the Ozark Trail. The truck is a standard Midland 2½-ton, equipped with Buda motor, Sheldon axles, Brown-Lipe transmission, Ross steering gear. The body equipment is of the platform type with solid removable sides and top, for hauling bulky material such as is used in the oil fields of Southwestern Oklahoma and Northern Texas.

The complete weight of the truck, including body equipment, without load, is 6100 lb.

This freight service will be of great assistance to concerns in this section, and it is doing a great deal toward relieving congestion.—Midland Motor Car and Truck Co., Bert B. Furcien, Production Manager and Chief Engineer.

### To New York State Mountains

*Editor Motor World:* By a vote of practically two to one, two million men and women in New York State have approved a measure which will open one of the largest and most beautiful playgrounds in all America to the motoring world. I refer to the construction of a State highway from Saranac Lake to Long Lake and thence to Old Forge by way of Blue Mountain Lake and Raquette Lake, a distance of approximately fifty miles.

No one amendment voted on in recent

years in this State was of greater interest to automobilists. Its approval opens up a heretofore practically inaccessible region, one of immense beauty and one which will attract automobilists from many neighboring States. While there are at the present time no funds sufficient for the State to complete the entire stretch, there is little or no question but that funds will be forthcoming and that the time is not far distant when another portion of the Adirondacks will be open to the world.

A small stretch of highway near the border of Franklin and Hamilton counties has already been improved, but the State will be compelled to improve stretches of considerable distance at either end in completing the construction of the entire roadway. The proposition presents no engineering problems of any great magnitude.

While there still remains a third of the \$50,000,000 bond issue, under which so much of our excellent highways have been built, little or none of this money is available for this new stretch of highway, the counties where money has been allotted for roads having already obligated these amounts.

With the announcement of favorable action on the part of voters of this State in further opening the Adirondacks, a glance and a comparison of the motor vehicle growth in this State during the past year proves more than ordinarily interesting. A year ago I had every reason to believe that the end of 1918 would find 500,000 motor vehicles in this State with receipts accruing of over five million dollars. While the demands across the seas were given preference which was theirs by every right and which no doubt played havoc with the automobile



*The first of a large number of Midland trucks to be employed for express and freight hauling over the Ozark Trail*

## Reconstruction Conference Thanks Trade Paper Publishers

*The following resolution was passed by a rising vote of the general session of the Reconstruction Conference at Atlantic City on Dec. 6, and received much applause:*

Whereas, Through the enterprise of the Associated Business Papers, Inc., in publishing the *Reconstruction Conference Daily*, the many separate activities of the conference have been reported to the delegates, and

Whereas, This has brought about a degree of co-ordination and correlation which would otherwise have been difficult to attain, and

Whereas, The Associated Business Papers, Inc., and trade papers generally, have contributed generously of their assistance in the preparations for the conference; and through the publicity and advice freely given their readers have played a highly important part in drawing together this record-breaking attendance of the leaders of American business, therefore

Be It Resolved, That the Reconstruction Conference hereby tenders its thanks and appreciation of the aid so effectively given by the business press of the country.

*The following resolution was adopted by Related Group No. 35 and by Major Group No. 10:*

Whereas, Advertising and scientific publicity have proven to be one of the greatest instrumentalities for overcoming the problems and emergencies incident to the achievement of victory in the world war, and in arousing, directing and mobilizing the national mind of the nation to a degree never before deemed possible, and

Whereas, Advertising is not only an incomparable selling force, but also a means for conserving man-power, for speeding up old industries and developing new ones, for cutting the cost of distribution, for assuring the steady employment of labor, and for accelerating all the processes which make for national prosperity, and

Whereas, The paramount necessity for developing our foreign trade requires the wide dissemination of information concerning American products, therefore

Be It Resolved, That this conference recognizes advertising and scientific publicity as one of the great and essential forces in accomplishing the reconstruction and maintenance of our industrial life on a high plane of efficiency and prosperity.

business, nevertheless ten months of this year have brought 28,000 more passenger cars to this State, while trucks have jumped from 53,000 to 73,000, but the dealers have decreased 466. There has been an increase in chauffeurs of over 13,000, brought about no doubt not only through the many men who entered the various branches of the service, but also due to the fact that New York State has licensed many women as drivers during the last year, women who have served their country, perhaps not at the front, but equally well in filling the driver's seat on more than one station bus or taxicab while the men shouldered a gun and crossed in response to their nation's call.

The following shows the motor vehicle registration and receipts in New York State up to November 1, 1918, and a like period in 1917:

	1917	1918	Inc. Dec.
Passenger ..	\$34,205	\$62,175	27,970 ...
Omnibus ...	11,507	17,711	6,204 ...
Trucks ....	53,686	73,797	20,111 ...
Trailers ....	917	2,150	1,233 ...
Dealers ....	2,712	2,246	466 ...
Total .....	402,110	458,079	55,969 ...
Chauffeurs ..	127,912	141,097	13,185 ...
Operators ..	84,274	98,209	13,935 ...
Motorcycles ..	28,603	28,356	247 ...
Total receipts ..	\$4,198,779	\$4,867,520	\$668,740 ...

Just what the coming year will bring forth, not only in the way of an increase in the motor vehicles of this State, but also in the way of legislation intended to better control the situation is a question which only the months to come will decide. With the return of the industry to normal conditions, I have every reason to think that a year hence will find ap-

proximately 600,000 cars in this State, with a corresponding increase in the way of receipts. There is no doubt but that the motor vehicle will receive the usual amount of attention from the Legislature, where bills both good and bad bearing on the automobile are annually introduced.—Francis M. Hugo, Secretary of State, Albany, N. Y.

## Fixing Retail Rates

Editor Motor World: I am a regular subscriber to Motor World. Would not do without it. I want some information. I am going to run three or four service cars over cross-country roads, Ford cars. Please give me basis on prices to charge by the mile and by the hour.—E. A. Wallace, Normangee, Texas.

It is difficult to give you a fixed price at which you should operate your Ford cars in livery service. One thing you should do, and that is determine what rate will give you a profit, and if you can't operate the cars at a profit you might better not operate them at all. For example, if you put a car in service you know about how many miles of service there are left in the car, that is, how long it will run before the car is no good. You also probably have a pretty accurate idea as to how much up-keep has to be done on the car during this period. You also know your tire cost, your gasoline cost, and what it costs you for a driver.

Figure out the length of time it is going to take for the car to become worth practically nothing, or let us say \$50, and

divide the value of the car by the number of miles it would travel in this period, that is the first item you must charge per mile; you must then add so much per mile for gas, so much for oil and so much for the driver and other overhead expenses. Add this all up and add a profit of about 20 per cent, and it ought to give you a figure that will make the business profitable for you.

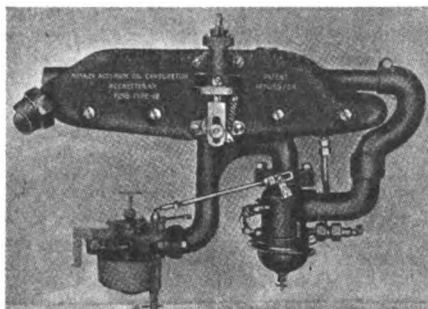
We do not know how other cab men figure their business, but in New York City cabs of about the same size as the Dodge run for 20 cents a mile. In some cities they run for 30 cents, 40 cents, 50 cents and almost up to any flat price, which figures out at about a dollar a mile at some times. Between Long Beach and New York City, a distance of about 25 miles, Packard livery cars make the trip for \$20, which is a little less than a dollar a mile for a one way trip. These cars, however, carry seven people.

If you are going into a jitney service to compete with the street cars, you will probably have to charge about 10 cents, and won't really know until you have operated a while whether you are making money or not. However you figure this out, we wish you would let us know the figures you use and prices at which you arrive. It has been our own personal experience that for a long cross country trip where there isn't a possibility of a load on the return 50 cents a mile can be charged, and some people who have been charging this have been in business for a long time, so they must be making at least a little money out of it.—EDITOR.

# Automotive Equipment

## COMFORT AUTOMOBILE ROBES

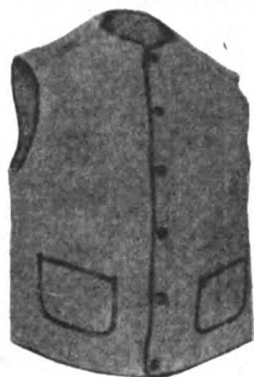
These robes are so made that they protect the shoulders and upper part of the body as they fasten up around the neck. Foot pockets at the bottom protect the feet from the cold and hold the robe down in position without other fastening. Made for either single passenger or for more than one passenger.—Comfort Auto Robe Co., Inc., Waterloo, N. Y.



Henner Kerosene Carbureter

## HENNER KEROSENE CARBURETER FOR FORDS

This is a kerosene burning device for Fords, consisting of a special manifold complete with heat regulation tube and thermostat, automatic valve and water metering attachment. To this manifold is connected the kerosene carbureter, but the original Ford gasoline carbureter is retained for starting. The entire equipment can be installed without machine work, and the parts fit right in place on the engine. Small gasoline tank, water tank and connection are furnished. Price \$55.—Henner Automatic Oil Carbureter Co., Inc., Rochester, N. Y.



Comfort Weatherproof Vest

## LEATHEROID TOOL CASE

This is a tool case made of Leatheroid. It is the shape and general design of the ordinary suit case and has a strong handle. The case is light in weight, yet strong enough to carry heavy tools without damage. Size 16 x 10½ x 5 in., \$6.25; 18 x 10½ x 5 in., \$6.50; 21 x 10½ x 5 in., \$6.75; 30 x 10½ x 6 in., \$8.—Rogers Fibre Co., 43 West Sixteenth Street, New York City.



Leatheroid Tool Case

## COMFORT WEATHERPROOF VEST

This is a high-neck vest, cut from one piece of material, without seams and just as warm in the back as in the front. It can be easily folded up and is proof against rain, wind and cold.—Comfort Auto Robe Co., Inc., Waterloo, N. Y.



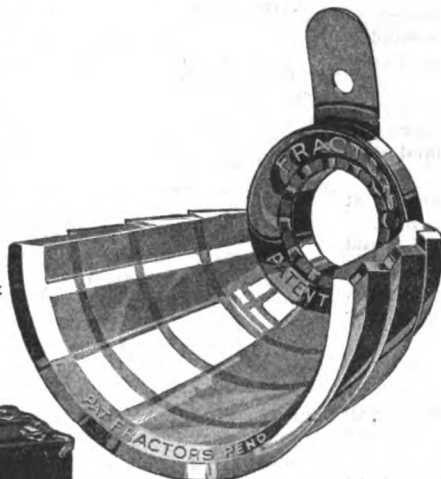
Right—Comfort Automobile Robe  
Below—Uvee Muffler



Scientific Garage Heater

## SCIENTIFIC GARAGE HEATER

This is an oil burning, wickless heater for small garages of two or three-car capacity. It burns kerosene or other free-flowing liquid fuel and the flame is prevented from communicating to the outside of the heater by safety gauze on the same principle as a miner's safety lamp. It requires no vents or smoke pipes and is portable. A 5-gal. oil tank is attached to the heater and this is removable for filling while the heater continues to burn. The oil feed is enclosed, but visible and an automatic stop comes into action when the capacity of the heater is reached. Price \$30. — Scientific Heater Co., 1065-1125 East 152d Street, Cleveland.



Fractor Glare Remover

## FRACTOR GLARE REMOVER

This is a semi-circular refracting lens which is placed under the bulb of the headlight and refracts or turns down the rays of light which ordinarily would go up in the air and cause a dazzling or glaring effect. The device has a series of molded prisms on the lower and outer surface, and these intercept all the light rays which would impinge on the lower half of the reflector. Made to fit any size headlamp and installed by simply removing the bulb, putting the collar in back and screwing the bulb in again. Price \$2.75 a pair.—Crew Levick Co., Philadelphia.



## UVEE MUFFLER

This is a muffler for cars, trucks or tractors. It is formed of a cylindrical shell with a fixed diameter of 5 in. and a length of 18 to 32 in., depending upon the size engine that it is attached to. Inside the cylinder are five units marked 1, 2, 3, 4 and 5. These are of various shapes and designed to lead the gas with a swirling motion around the members with a minimum of back pressure and noise. Some of the members have central openings and others have the openings at the edges to prevent the direct ejection of a "core" of gas.—International Steel Products Co., Hartford, Wis.

# The RETAIL NEWS

## New Truck and Tractor Dealers

The Pendleton Motor Sales Co., Pendleton, Ore., will handle Nash trucks in 1919.

Kenneth Chapman, Pendleton, Ore., has secured the agency for the Sandusky tractor.

Lee Joynes Co., Walla Walla, Wash., has taken the agencies for Duplex and Fageol trucks.

The Beckwith Motor Co., Walla Walla, Wash., will handle Republic trucks.

The J. W. Rogers Motor Co., Walla Walla, Wash., has added the Packard truck to its lines.

James L. Elam, Walla Walla, Wash., has renewed his Overland contract and added the Moline tractor and Bethlehem truck.

Lars Nilsson, Dayton, Wash., will merchandise the Holt caterpillar tractor.

Wood & Lane, Walla Walla, Wash., have added sales departments for the G. M. C. truck and Samson tractors.

R. L. Bogardus & Co., Inc., operating the Spokane Auto Market, W313 Sprague Avenue, Spokane, Wash., are pioneers in establishing salesrooms for the merchandising of used trucks and used tractors in the Inland Empire.

Ahrens & Ahrens, 901 First Avenue, Spokane, Wash., have been appointed distributors of the Fageol truck in the Inland Empire.

E. B. Snyder has opened salesrooms at 1024 First Avenue, Spokane, Wash., for Atterbury and Stewart trucks and Cleveland tractors.

Larson Bros., Inc., W1227 Sprague Avenue, Spokane, Wash., have secured agencies for the F. W. D. truck and Trundaar tractor.

The McKinney Auto Co., Wartsburg, Wash., has signed for the Republic truck.

Cram Bros., Colfax, Wash., have entered the truck field with the Signal and Service lines.

The Cornellus Garage, Buick dealer at Colfax, Wash., has contracted to handle the G. M. C. truck and the Samson tractor.

The T. S. Steel Machine Co., Walla Walla, Wash., has secured selling agencies for Mack and Service trucks and Rumely and Lauson tractors.

The Chambers-Weaver Motor Co., Iroquois Garage Building, Buffalo, has been formed to handle Mack trucks.

The Cleveland Tractor Co., Cleveland, has appointed the Cardwell-Lyman Sales Co., Oklahoma City, Okla., and the Little Rock Motor Car Co., Little Rock, Ark., as distributors.

F. C. Huber, Cherokee, Iowa, who has been local distributor for the Moline Universal tractor in Cherokee County, has been made general distributor for all of northwest Iowa.

R. L. Kent and C. P. Broughton, both of Omaha, have formed a partnership to handle the Buick agency at Harlan, Iowa. Mr. Broughton, who has been sales manager for the Nebraska Buick Co. at Omaha, will be in active control. The company will handle G. M. C. trucks and Samson tractors in addition to the Buick line.

The Sanford Motor Truck Co., Syracuse, N. Y., has appointed the following dealers: Armand R. Vanasse, Anthony, R. I.; Frank Crook, Pawtucket, R. I.; Roscoe Benjamin, Winsted, Conn.; C. W. Perkins, New Mil-

ford, Conn.; Herr Bros., Quarryville, Lancaster County, Pa.; Jones Auto Co., Willimantic, Conn.; A. J. Schnell, Schnell's Garage, Scranton, Pa., and American Motor Sales Co., Erie, Pa.

The United States Motor Truck Co., Covington, Ky., has appointed the following dealers to handle its line: F. A. Jack, Louisville, Ky.; Stearns Motor Car Co., Youngstown, Ohio; Creele Motor Car Co., Birmingham, Ala., and Webb & Bush, Lexington, Ky.

The Five Points Auto Co., Durham, N. C., has taken on the International motor truck for six counties.

The Chambers Motor Sales Co., Toledo, Ohio, has taken the states of Ohio and Michigan distribution for the D-E trucks and the Turner-Simplicity tractor.

Nilson Tractor Co., Minneapolis, has recently made new distributor contracts with the Peru Van Zandt Implement Co., Wichita, Kan., and the S. J. Taber Co., Fargo, N. D.

## Among Dealers, Garagemen and Repairshops

C. E. Scott and D. H. Showalter, Baxter Springs, Kan., have purchased the Motor Inn Garage and have taken over the business. They will conduct a general storage, repair and accessory business.

Best & Drake, Hazelton, Kan., have bought the garage building of F. G. McClain at a consideration of \$3,500.

The East Side Garage, Humbolt, Kan., conducted by Ludlum & Baxley, is being remodeled. The machine shop is to be fitted for rebuilding and overhauling motor vehicles. A complete oxyacetylene plant is being installed.

H. A. Geeman, Medicine Lodge, Kan., is successor to Fair & Skinner in the garage and automobile business.

Fordice & Blabee, Norton, Kan., have bought out the Burros & Kirkman garage.

H. M. Taylor, Sedgwick, Kan., has purchased the Sedgwick Garage from Everett Edgington. He will add machinery and equipment and will also carry a line of tires and accessories.

The Hodge Motor Co., Sterling, Kan., has taken the agency for the Columbia Six for Rice, Darton and Stafford counties.

H. M. Hosey, Toronto, Kan., has established a new automobile salesroom here, having moved his business recently from Buffalo, Kan.

George G. Tedrick, Altamont, Mo., will open a supply shop soon.

William L. Koenig and George B. Esser, Boonville, Mo., have dissolved partnership in the Vine Clad Auto Co. The business will be continued by Mr. Esser.

The Automobile Battery & Electric Service Co., Carthage, Mo., has filed articles of incorporation with a capital of \$24,000, with the following shareholders of Joplin: W. C. Randall, E. P. Beine and F. D. Newton.

R. E. Ripley, Fayette, Mo., has opened a repairshop.

Hanson Smith, Montgomery City, Mo., has purchased the Montgomery County Garage from Marlow & Peters for \$8,500. Mr. Smith does not take over the accessories and stock on hand, nor the Studebaker agency. He will, however, be the agent for the Chevrolet and Overland.

J. R. Prewett, Pleasant Hill, Mo., in the garage and supply business, has bought the buildings of the Green Light & Power Co., and will expand his business and remodel the buildings.

The Victory Garage, Ardmore, Okla., has been chartered with a capital stock of \$10,000 by A. D. Bailey, Ben Stephens and S. N. Dillard.

A. L. Schroeder of Hutchinson, Kan., has purchased the half interest of H. C. Noble in the Alva Buick Sales Co., Alva, Okla.

G. D. Harwell, Boswell, Okla., is the successor to D. H. Fry in the garage business.

The Paige Sales Co., Enid, Okla., distributor of the Paige car, has opened an agency in Medford, Okla., to be known as the Paige Motor Agency. I. H. Thomas is at the head of the Paige Sales Co., and his son, C. F. Thomas, is in charge of the agency at Medford.

Moore Automobile Co., Grand Forks, North Dakota, Ford car and Firestone tire distributor, has taken on the Reo line for the state of North Dakota and northwestern Minnesota.

Kopac Bros., David City, Neb., with branches in Columbus, Skuyler and Norfolk, are moving their main branch to Omaha, and will occupy the building formerly used by the Omaha Auto Supply Co. All the other locations will still be maintained.

Kauffman & Rector, Charlotte, Mich., is the name of the firm that has opened the LaMont Garage on East Lovette Street, recently vacated by Charles White.

The Willard Storage Battery Service Station, Lansing, Mich., owned and managed by H. F. Heath, has opened its new service station at 118-119 West Washtenaw Avenue. This additional space was necessitated by the rapid growth of the business.

Mayfield Bros. have established Velle salesrooms and Bosch magneto service station at Walla Walla, Wash.

D. B. Kincheloe has opened a repairshop in Walla Walla, Wash., under the name of Dan's Garage.

The Spokane Tire Shop, distributor of Mohawk tires, has moved to 925 W. Sprague Avenue, Spokane, and trebled its floor capacity.

H. Hartz, Philadelphia, has purchased from the Columbia Garage Co. at Columbia Avenue and Patton Street, its new garage building on a lot 60 x 238 ft.

H. S. Fender & Son, Prescott, Wash., have enlarged their garage.

J. F. Jackson, La Crosse, Wash., has added Chevrolet salesrooms to his garage.

The Colfax Battery Station has been opened on North Main Street, Colfax, Wash., with Willard battery service.

Root & Dahl have opened a vulcanizing shop in Colfax, Wash., and will represent the Gates half sole.

The Colfax Garage at Colfax, Wash., has been remodeled, and attractive Dodge and Hudson salesrooms have been added.

The Stewart Products Service Station has been opened at 1131 West First Avenue, Spokane, Wash.

F. H. Berry has purchased the Shaddock Garage on South Palouse Street, Walla Walla, Wash.

Wood & Lane have erected a new building, 100 x 164, in Walla Walla, Wash.

W. J. Burns, Pendleton, Ore., has rented the corner of Cottonwood and Water streets and has installed an oxy-acetylene welding plant and a battery department specializing on Exide batteries.

The William E. Chase Co. has purchased the Auto Ignition Battery Co. plant at Pendleton, Ore.

# Did You Fight with the N. A. D. A.?

It Has Fought for You and Now It Wants You to Take Your Place in Its Ranks to Help You Safeguard the Future of Yourself and All Other Dealers—It Wants You to Act NOW

**D**URING the months that Vesper and Peake and the rest of the officers of the National Automobile Dealers' Association were at Washington and elsewhere in the interests of the dealers, were YOU backing them?

## *Were YOU Helping Fight Your Own Fight?*

If you were not in the work then, get in NOW. You are going to need the N. A. D. A. now more than you ever needed it before, for the problems ahead are greater than the problems behind.

Supposing that some condition develops during the next few months—as it may—which would work to your harm and to the harm of all other dealers, who's going to fight?

## *Can YOU do it single-handed?*

Single-handed you would be like a lone soldier stacking up against an army.

Supposing the state legislature in your state undertakes to wish an injurious law on you and suppose there is no strong organization in your state. Who's going to fight for you?

## *Can YOU do it single-handed?*

Wouldn't it be better if you had the right to ask the N. A. D. A. to step in and take the load off your shoulders?

Supposing some disreputable dealer sets up in your town, gets a connection with a factory and begins to wreck business.

## *Who's going to stop him?*

If you tried to correct the situation would you be considered anything other than a disgruntled competitor?

Wouldn't it be better to let the N. A. D. A. give you a little help?

And wouldn't you feel more free to call upon the N. A. D. A. if you were a member of it?

Supposing some national law or regulation affecting your business were not known to you until too late for you to get out from under? It might cost you something, mightn't it?

Wouldn't you like to have the N. A. D. A. keeping you in touch with all these things?

Supposing you had almost any old trouble and couldn't get from under.

*Wouldn't it be worth while to have a national organization to back you up?*

The N. A. D. A. has already earned your support and all it asks is that you give it what it has earned. A letter on your letterhead—with a check for \$15—is due to the N. A. D. A. from you.

The N. A. D. A. has engaged Harry Mook, formerly an able association manager in Colorado and nearby states, to manage the N. A. D. A. and look after YOUR interests. He is just getting started with some big work and the membership campaign is drawing to a close.

The campaign was aimed at 5000 members. There are about 4600 now. Let's send it up to the mark—and then some—and get back to business with a national organization that will help every one to make more money.

Oh, yes—the address of Executive Secretary E. E. Peake, who is handling the campaign, is 909 Gloyd Building, Kansas City, Mo.

As a fitting close to the most wonderful year any man ever passed through give the N. A. D. A. a big start into 1919.

Not next week—TO-DAY.  
Attaboy!

## Hugo Says No!

ALBANY, N. Y., Dec. 16—Francis M. Hugo, Secretary of State, does not favor the suggestion made by Colonel Edward S. Cornell, of New York, for the creation of a new department of the State government to have jurisdiction over motor vehicles, which is now taken care of by the automobile department of the secretary's office. Hugo says he is not aware of a demand for a separate department

because he believed the work of the automobile bureau had given general satisfaction.

In a statement Secretary Hugo says: "The affairs of the department have been run in an economical manner, which is shown by the fact that the operating expenses have been reduced from 19½ per cent in 1914 to 8 per cent in 1918. There is no necessity for any extra commis-

sion or department, as it would be a large, additional and unnecessary expense to be paid for by the State without any greater efficiency."

Hugo calls attention to the fact that the automobile bureau is the third largest revenue producer in the State. Four years ago it produced \$1,500,000 in revenue and this year it has collected more than \$5,000,000.



## No Cars to Sell—So

# Bentel Makes New Cars Out of Old Ones

And Sells Some for \$10,000



*This is the Bentel building in Los Angeles. It is devoted exclusively to the manufacture of products instead of to car merchandising*

**T**HIS is a story without any French idioms for placing the responsibility on the war, yet, as a matter of fact, the war is what did it.

Without a sequence of "if's," it never would have come about that one of the oldest motor car dealers in Los Angeles, a man whose territory for the distribution of high-grade motor cars has embraced the entire Pacific slope, quit the passenger car business.

*He quit it cold and here the war must be made the goat, as he says there is no probability of his*

*return until after the Yanks have marched proudly along Unter den Linden or the kaiser wears a kimono made of wood. Meantime the dealer is getting by.*

Away back in 1907, George R. Bentel, the hero of this tale of conversion, "dabbled" in automobile equipment. His ideas of design and materials were somewhat advanced over those of factory engineers and whenever he learned of Mr. Aristocrat having bought a \$5000 motor equipage, Bentel called upon him and sought to interest him in some Bentel extras.

At that time the Bentel shop was

*The War Has Helped a Los Angeles Dealer Develop an Idea That He Started to Work Out Years Ago—It Is Saving His Business To-day*

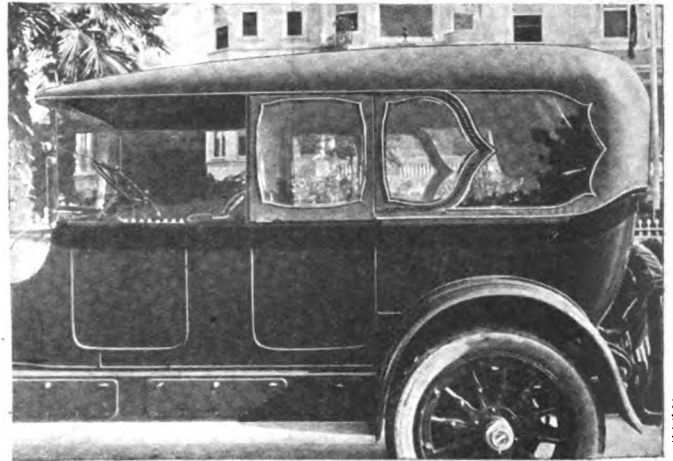
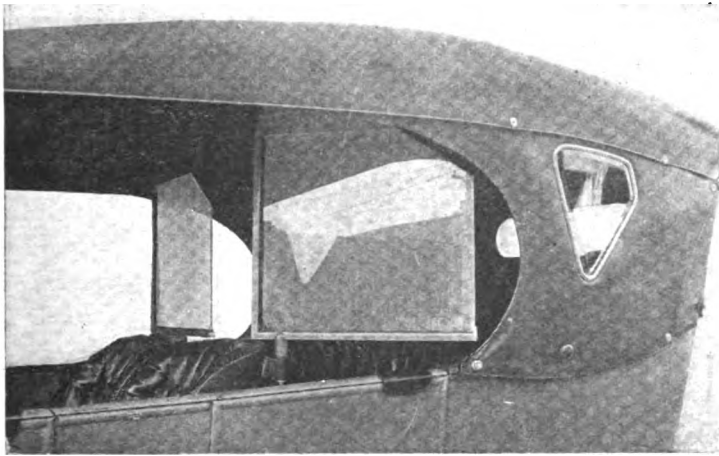
a one-story structure on South Main Street and the chief line of talk in soliciting trade was: "We can fix your car up so that there is none other like it. The newspapers will print a picture of it and it will be known as your car wherever it is seen."

Quite a few fell for the idea, but the first of the succession of Bentel's main chances came when he obtained the agency for the Simplex car. Whenever he could he sold the chassis only to a customer and built a special body in his own shop. Some of those were rather crude affairs, but he always put as much luxury and extravagance into the bodies as the owners would stand for and in that way obtained the opportunity for inculcating his own advanced ideas. He knew the appeal of beauty and pride and capitalized on these frailties to the extent that he established a reputation.

In following years competition with Eastern factories became too acute and buyers began to prefer "factory-built" to "home-made" jobs. Then Bentel began centering his activities upon merchandising motor cars and in 1911 took on the agency for the Mercer. He rented a building on a main corner of Motor Row and became a car dealer in every respect. He had the Mercer and Simplex lines. The speed craze struck the coast about that time and Bentel became one of the principal enthusiasts of motor racing. He sought to sell a Mercer or Simplex to every sportsman with money enough to finance a race entry, and whenever one of these "angels" was lacking he would enter cars himself.

The fame of the Mercer and Simplex in racing circles on the coast was due to Bentel. When it became too long a time between races to satisfy him, he would promote a race meet himself, and the fact that Ascot Park, Los Angeles, to-day is a paved one-mile track on which numerous records have been hung up is due to Bentel.

About two years ago, when distributors in general decided they could handle makes of cars of different types of con-



*Left—Tonneau wind deflectors that keep wind out of the car. It is here shown in use on the near side of the machine. Right—Sample of work done in the Bentel shop—a top on a Locomobile car*

struction, Bentel obtained the distribution of the Jordan. One of the first things he did to popularize this line was to equip the cars with Victoria or semi-Victoria tops, paint them in various hues and make them look different from the usual standard jobs.

Early in 1918, Bentel saw the drift of things. He realized motor car production and sales would have to be subservient to the needs of the country for winning the war. Although he had become the largest Mercer distributor in the country he acted upon the principle that once having been a custom builder he could be one again, so he withdrew entirely from selling cars and began devoting his entire resources and a brand new four-story and basement building on Grand Avenue, he had just occupied, exclusively to construction work.

Bentel introduced wire wheels to the Pacific coast, was first to build Victoria tops, was first to put disks on wheels, first to make tonneau windshields and

first to make a roller curtain top. He now employs about 60 men in his plant and manufactures and distributes Bentel products only.

#### Little Touches That Add Dollars

In the tonneau windshield and roller curtain top, there are indications that Bentel has struck upon something of popular fancy. He has built a \$10,000 motor car complete, making use of a Mercer racing engine and parts from the equipment of his racing stable, but the wind deflector and new top he believes are the best prospects for the future.

"Why should the family sit in the rear seat of an open car and take all the wind, while the chauffeur sits in comfort behind the windshield?" he asks. The wind deflector he has designed is of two glass wings with a leather curtain attached on the bottom. Owing to the front windshield, tonneau occupants do not get the wind from straight ahead

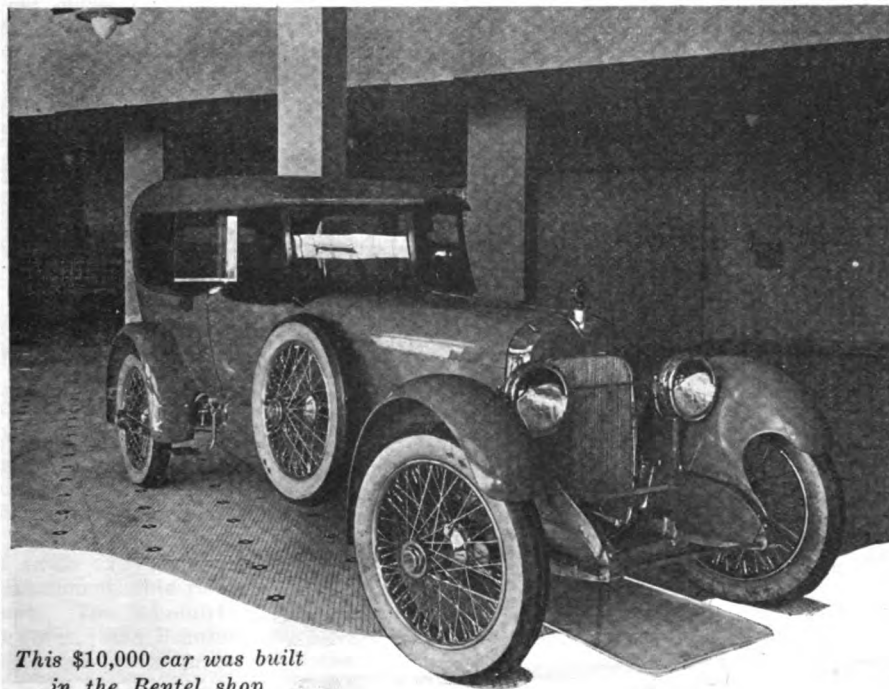
but around the sides. The Bentel deflector is attached to the back of the front seat and is easily and quickly adjustable without the use of tools. The apron at the bottom keeps the air from being driven down to the floor of the tonneau.

The roller curtain top is distinctly an innovation. There are six curtains, three to each side. They are of celluloid, bound with leather substitute. One end of the curtain is made of canvas and extended so that it operates over a roller concealed in the top of the car, the curtain itself always remaining flat. The curtain may be drawn into position and buttoned instantly by the car occupant. The rollers are concealed in the top but there is a removable panel of top material which permits of direct and quick access. The top is of the semi-Victoria type and the lining hides the curtains from view when not in use. Already he has received inquiries from motor car factories and the Bentel top may become standard equipment on some cars when production is resumed after the war.

#### First N. A. D. A. Bulletin

ST. LOUIS, Dec. 16—The first number of the N. A. D. A. Bulletin under the editorship of Harry G. Moock, the newly installed business manager, was mailed this week. A strong plea is made in one of the editorials for dealers not to resume the wasteful practice of keeping their service shops open nights and Sundays. The caption to the editorial is, "You Are in a Regular Business. Why Not Conduct It as Such?" One of the paragraphs reads:

"Here is what one big dealer who formerly maintained twenty-four hour service has to say: 'I shall keep our place of business closed nights, Sundays and holidays. By careful compilation, I have found that I can lose the profit on twenty new car sales a year and still be ahead of what it would cost me to keep my place open, granting that keeping open would sell the extra cars. The high morale and efficiency of my employees is one hundred per cent since we have been closed nights. I further question whether the end of the year will show a loss in any department. I, FOR ONE, STAY CLOSED.'"



*This \$10,000 car was built in the Bentel shop*



H. I. WAGGONER

*Write Motor World  
a Letter and Answer  
This Question:*

## What Is the Biggest Idea *in the* History of the Electrical Testing Company?



H. W. SAYLES

**I**N May, 1907, H. W. Sayles and H. I. Waggoner started the concern known as the Electrical Testing Co., at 922 South Adams Street, Peoria, Ill. This company was organized to test and repair electrical instruments and meters. The place was run at first without any additional help and a large part of the work came from out of town.

A few single-cylinder cars appeared on the streets and occasionally the spark coil would be brought in there to be looked over, but no thought was taken of this end of the business.

A friend came down from Chicago and advised that his concern was doing quite a lot of work on small vibrating units, which was the source of ignition on practically all cars at that time. The company then began to look into this matter and took up the repairing of these units, this being practically all the electrical work there was on the car.

One of the first jobs of trouble hunting was on a six-cylinder Ford car. This car was quite complicated and had a lot of unnecessary apparatus. The automobile work continued to come in and of course every effort was made to take care of it. It was impossible to get a car into the small shop on South Adams Street, and

in 1912 a lot was purchased at Knoxville and Fayette Streets and a small building erected there.

It was thought that room for one car would be plenty, as that was all that could be worked on at one time, as they had of course a very small force. The next year an addition was put on, so that five cars could be put in with a little crowding. This gave very little relief, so it became necessary to do a lot of work outside. A new building had been contemplated for some time and considerable thought was given to the lay-out to make it convenient for this work.

After investigating several building sites, the one was chosen at 300-302 Knoxville Avenue, near Hamilton Boulevard. The building was constructed with a view of giving the motorist the greatest possible convenience.

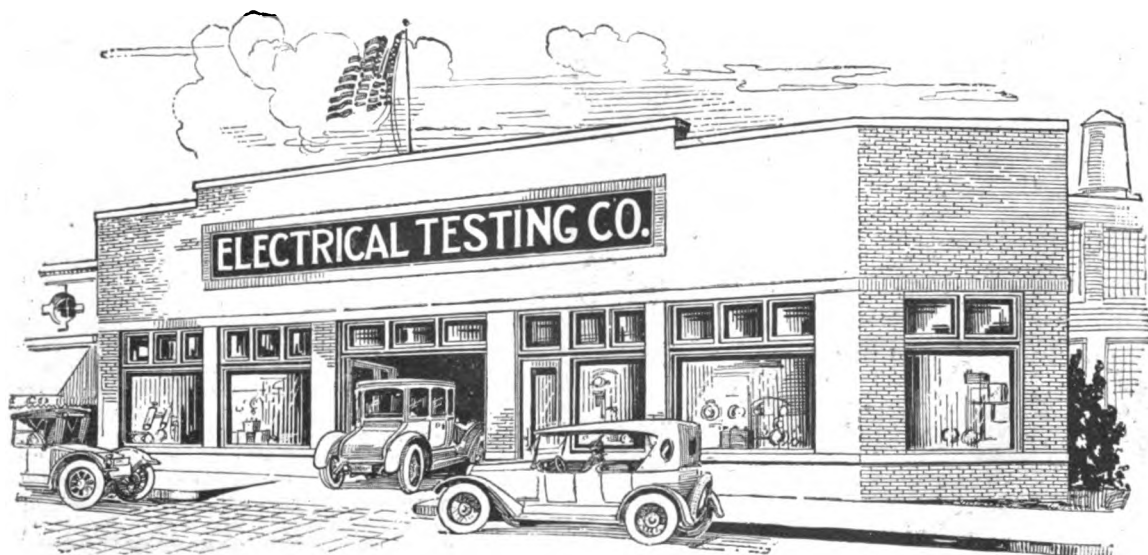
The shop and office occupy about one-half of the building. On the other side is the driveway through the building, and the parking space for twenty-five cars. All cars enter at the front of the building and drive through and out the back door. They have access to three streets, Knoxville and Fayette and Hamilton Boulevard. The longest cars can easily get into the alley, as has been demon-

strated several times. Even a truck with a trailer goes through very easily. The alley has been given a coat of cinders and is extremely hard, so that any kind of wet weather has no effect on it.

The entire floor with the exception of the office is of cement. It has been given a coat of cement enamel of a gray color. This keeps the cement from giving off the fine dust which would be noticeable if not painted. The walls and ceiling have been given a coat of white paint, which greatly adds to the illuminating conditions of the building. There are five skylights and in these is a muslin screen to prevent the direct rays of the sun from falling on the workmen.

After the vibrating coil work was done, magneto's and magneto coils were brought to our attention. There were no electric starters used and very few storage batteries. Batteries at that time were used almost entirely for ignition purposes and were therefore very small. This work came, however, hand in hand with the other electrical work and was therefore taken in hand by them. The advent of the electric starter of course, brought quite a lot of battery work, and they have prepared for more battery

*(Continued on page 43)*



*All cars enter the front door, go right through the building and out the back door. No customer can take his car out unless he pays the bill or gets the O. K. of the office*

## Jobbers Gathering for Their Annual Meeting

**N. A. A. J. May Change Name  
to International Automotive  
Equipment Association**

By Ray W. Sherman

CHICAGO, Dec. 16—From the crowd that is gathering for the winter meeting of the National Association of Automobile Accessory Jobbers, it looks as though the jobbing trade is coming back to business in short order.

The Congress Hotel, where the sessions are to be held to-morrow and Wednesday, is packed with tradesmen, and all the old faces and some new ones make the hotel look as it used to be before the war caused the meetings to stop. There is a letup in restrictions and materials all along the line and all look forward to a good year in 1919.

To-day there are committee meetings. The membership committee is getting the applications lined up for to-morrow's sessions and the standardization committee and the Board of Directors are also at work.

The general topic of interest is the defense of the association's leaders at their trial in New York, Jan. 6, on a charge of violating the Sherman Anti-Trust Law. The jobbers generally are optimistic as to the outcome. It is probable that the proposed change in name will be made, making the organization the International Automotive Equipment Association.

It is also considered probable that the constitutional amendment will be adopted, placing manufacturing and jobbing members on an equal basis in all things. Heretofore the jobbers have had some rights not accorded to manufacturers, such as refunds and convention expenses and certain voting powers. There is considerable sentiment toward holding the next meeting at Hot Springs, Va., in June. This resort is the scene of two past meetings and has many friends.

Officers will be elected. According to the previous procedure, the vice-president moves up. This would make Philip H. Lyon, Chanslor & Lyon, San Francisco, the next president, succeeding Sidney F. Beech, of the Motor Car Supply Co., this city. Separate meetings of the jobbers and manufacturers will be held to-morrow afternoon in order to expediate matters.

### Oil Industry Asked to Lift Restrictions

WASHINGTON, Dec. 16—The Fuel Administration has asked the oil industry to lift all its voluntary restrictions on crude oil prices and distribution and on refined products. This removes the entire oil industry from Government supervision. Unless events prove the necessity of again exercising control, says the announcement, this release will be permanent. The administration points out, however, that licenses now outstanding will remain in force until the Presi-

## Full Details

Next Week in Motor World

of the

**N.A.A.A.J. Meeting**

dent's proclamation of peace and all agreements made heretofore will continue subject to cancellation or assignment on request of the Fuel Administration. The allocation of supplies of petroleum products for the Allies will end Feb. 1 and the priority orders for export of gasoline and kerosene will expire at the same time. However, the allocation of aviation gasoline for the Allies and the American Expeditionary Forces will continue until further notice is given.

### Tax on Passenger Cars Opposed

WASHINGTON, D. C., Dec. 16—B. J. Ruddle of the National Automobile Dealers' Association conferred with Alfred Reeves, General Manager of the National Automobile Chamber of Commerce, here to-day regarding the tax on automobiles and parts as provided for in the Revenue Bill for 1919. Ruddles came to Washington at the request of F. W. Vesper, President of the N. A. D. A., to go into this matter with Reeves. The feeling generally is that the 5 per cent tax on passenger cars, trucks and parts sold by the manufacturers, and especially the latter, is an injustice firstly because these commodities are not luxuries and secondly because such taxes are certain to hamper prosperous business and will thus react directly against the prosperity and increased peace business that is essential now. Further conferences on presenting these matters to Congress will be held.

### Prominent Maine Dealer Dies

PORTLAND, Dec. 15—Albert M. Speare, Jr., one of the most widely known automobile men in New England, and president of the Portland Automobile Dealers' Association, died here yesterday after a brief illness. He had handled some of the best known cars on the market, and he was the distributor of Dodge Brothers cars since that line was introduced into Maine. In all movements for the betterment of motor conditions in legislation, highways and other matters Mr. Speare was a leader and his advice was sought by others throughout the state. He was born in Wisconsin 50 years ago. Mr. Speare is survived by a wife, three brothers and three sisters.

## Chicago Dealers Show Dates Jan. 25-Feb. 1

**N.A.D.A. Will Hold Annual Meeting During the Event—New York Meeting Planned**

CHICAGO, Dec. 16—*Special to Motor World*—The Chicago show is to be held Jan. 25 to Feb. 1. The Chicago Automobile Dealers' Association has chosen these dates, thus for the first time in many years placing the Chicago event ahead of the one in New York.

The annual meeting of the National Automobile Dealers' Association will be held in the Hotel La Salle during the show, the dates being Jan. 28 and 29. During the New York show the N. A. D. A. will hold an Eastern Division meeting. The date probably will be Feb. 5.

### National Electric Service Body

CHICAGO, Dec. 13—A national organization of service stations, specializing in electrical equipment, has been organized in Chicago as the National Automotive Electric Service Association. Arthur Jones, president of the Arthur Jones Electric Co., is president; Alfred E. Urban, of Pellet Magneto Co.; vice-president; John W. Buzicha, manager of Motor Electric Equipment Co., secretary, and R. J. Hardacker, manager of the North East Electric Co., is treasurer. All officers are Chicago men.

The object of the organization, to quote from the by-laws recently adopted, "shall be to promote and improve service on the electrical equipment of automotive vehicles, by co-operation between its members and others interested in the same line of business."

Another object, not stated in the by-laws, is to improve the present unfair conditions brought about by the manufacture and sale of spurious electrical parts, a situation which has caused a great deal of trouble, both for manufacturers of standard parts and for the service stations. It is expected later to furnish these men with an emblem which is to be hung in a conspicuous place and to advertise to car owners to look for the service station with the association emblem.

In speaking of this activity, President Jones said, "We will make a strong appeal to the car owner to do business with members of our association, with the promise that if they are overcharged, or the work is faulty and the service station does not make satisfactory settlement with the car owner, it can be reported to the association which will make a thorough investigation of the complaint, and the finding of the association will be binding on its members. Prospective members must qualify as to necessary equipment, which the association believes essential to handle service properly."

Membership in the association will be by firms, rather than by individuals, each firm being entitled to two representatives, with one vote for each.



## England Started Show Talk Within One Week

**As Soon as Armistice Ended  
Britain Began to Swing Back to  
Business—Aviation a "Comer"**

LONDON, Nov. 24—(*Special correspondence from David Beecroft, directing editor of Motor World, who is now in Europe as a member of a special commission*)—Within just one week from the announcement of the armistice terms the motor trade in England decided on a program of exhibitions for next year, the time being too short to hold the usual Olympia exhibition this November in accordance with pre-war rules.

The first post-war exhibition will be held in November, 1919, at the Olympia Hall, and while many post-war models will be marketed long before that date and are actually being announced now, that date will mark the first great bringing together of the post-war models. The Society of Motor Manufacturers and Traders will handle the show.

Other exhibitions are being discussed but dates have not been fixed. The increased importance of motor trucks and farm tractors points to a combined exposition of such vehicles at which will also be exhibited farm machinery specially designed for use with motor tractors.

Aviation expositions will be held throughout the British Isles. The lack of public interest in aircraft which existed previous to 1914 is now passed and aviation exhibitions will without doubt be great events, particularly as it is now recognized that there are many commercial uses for the airplane.

The war has added much stimulus to motor boating and some form of national motor boat and marine exhibit is being discussed. Such an exhibit, in addition to catering to pleasure craft, will include motor barges, fishing vessels and many other types using the explosion engine.

### Ford Building for Des Moines Show

DES MOINES, Dec. 15—Plans are practically completed for holding the Des Moines motor car show in the new Ford building. Two floors of the building are to be used and this will give a floor space of 115,000 sq. ft., more than five times as much as has ever been possible in previous Des Moines shows. There will be four units of the Des Moines show, each segregated as to space from the rest. Accessories and specialties, passenger cars, trucks and tractors will be segregated. Managers of the Des Moines

## WHAT NEWS of Shows?

show have protested the Minneapolis dates which conflict with the Des Moines show dates which were set at the meeting of show managers as Feb. 17 to 22. Regardless of the outcome of the protest, however, managers of the Des Moines show have announced that there will be no change in the local dates.

### Rubber Imports Drop

NEW YORK, Dec. 16—Importations of crude rubber have been steadily declining during the past 11 months and during the month of November reached a new low level when the total tonnage to come in amounted to only 3363 tons. As compared with November, 1917, when 13,611 tons were imported, this is a loss of 10,248 tons. Similarly, there was a big drop in the figures for November this year as compared with October, the loss being 6146 tons. The total imports for the 11 months to date are approximately one month's supply below those for the same period last year, taking an average month's imports as a guide. During the period in 1917 imports total 158,906 tons as compared with 144,003 tons for the first 11 months of 1918.

## New York Show in 69th Armory Also

**Makes Exhibition More Than Twice  
as Big as Originally Planned—  
Space Plans Ready This Week**

NEW YORK, Dec. 16—In addition to Madison Square Garden the New York Automobile Dealers' Association has secured the Sixty-ninth Regiment Armory in which to house its big exhibit, Feb. 1 to 15.

The Sixty-ninth Regiment Armory is a short block distant from the Garden and contains more space than there is in the Garden, which more than doubles the original size of the show.

The dual show will be equally good in both buildings. The Armory exhibition is not to be an overflow, but an exhibit on an equal basis with the Garden show with some of the best known cars in the industry in each building.

Manager Charles A. Stewart, who is operating in the association offices in the Woodward Hotel Annex at Broadway and Fifty-fifth Street, states that there will be quite an automotive equipment show in both buildings. In place of the usual 10 x 10 spaces given to the accessory people the spaces this year are to be 12½ x 12½, and in the Armory they will all be arranged around the outside of the main floor. In the Garden the spaces will be in the gallery directly above the boxes.

## Boston Show Date Is Set for March 15-22

**Dealers Vote to Hold Show But  
May Not Include Trucks Because  
Basement Is Full of Flour**

BOSTON, Dec. 12—The Boston Automobile Dealers' Association had a meeting yesterday, and the directors voted to have a motor show in March.

The date selected is March 15 to 22 instead of the regular time of the first week in March. This was due to the association not being able to get the hall earlier, and present indications point to its being an exhibition of motor cars and accessories only.

In other years the trucks were included. This year the basement of Mechanic's building is filled with flour, wool and other things stored there by the government and the railroads, and unless they are taken out there will be no place for a truck show. The dealers hope that the government will remove the things to the big storage warehouse just finished at South Boston, where there is ample room for them.

The motor car dealers are well satisfied with the date being placed back a couple of weeks, as it will afford the factories better chances for getting new cars through, and the weather will be more settled nearer April. A number of the big dealers would just as soon not have had a show, for they believe there will be a bigger demand than the factories can supply and so many people will come to Boston looking for cars only to be disappointed.

Some of the truck dealers now are considering the feasibility of having a truck show the week following the car show in case it will not be possible to get into the regular exhibition, or if not then either before or some time after the car show.

### Money for Airplane Mail

WASHINGTON, Dec. 15—An appropriation of \$2,185,000 for purchase of airplanes and maintenance of air line mail service for the Post Office Department is recommended in the Post Office Appropriation Bill. This is an increase of \$1,185,000 over the \$300,000 originally estimated by the Department. The committee also recommends an appropriation of \$1,000,000 for motor truck mail service, which is \$700,000 more than the \$300,000 authorized in the act of June 2, 1918. The Post Office authorities asked for \$1,500,000 for motor truck service.

### Four Wheel La Crosse Tractor

LA CROSSE, WIS., Dec. 16—The La Crosse Tractor Co. is shortly to enter the market with a four-wheel type of farm tractor. This will be known as model G and though it differs considerably from its predecessor, Model F, it is not entirely a new model but is essentially a modification of the former in which two front wheels take the place of the single front wheel used heretofore.



## Wisconsin Dealers See Big Tractor Exhibition

Implement Dealers Association Draws Together 350 Types of Farm Machinery

MILWAUKEE, Dec. 14—One of the largest and most comprehensive exhibitions of tractors and power farm machinery ever staged under roof was that which accompanied the thirteenth annual convention of the Wisconsin Implement Dealers' Association at Milwaukee, Dec. 10, 11 and 12. The entire auditorium was pressed into service to accommodate the display, the general sessions, and sectional meetings. The machinery exposition contained more than 350 distinct exhibits, from giant tractors to automatic milkers. Farm lighting systems were an interesting feature.

The promotion of tractor sales, with the consequent enlargement of power farm machinery business, formed the principal topic of discussion at the general meetings, which were attended by nearly 500 dealers, jobbers, wholesalers and manufacturers. It was reported that at the close of this year Wisconsin has in service approximately 2500 tractors, while there are more than 80,000 farmers owning and operating farms of 100 or more acres within the state, furnishing a tractor market of exceptional potentiality and indicating that the surface of the market has only been scratched.

Speakers at the convention urged that dealers, jobbers and manufacturers join in an effort to make 1919 the greatest tractor year in the history of Wisconsin as well as other states. It was pointed out that the cry of the world for food, which is directed principally at America, makes it necessary for every producer of food-stuffs in this country to continue to do his utmost and even enlarge the increase in production effected during the last two years while this nation was at war. The returning armies will not have an appreciable effect upon the farm labor market for more than a year's time, if then, and the power farm machine must be employed even on the smaller acreages if results commensurate with the farmers' investment are to be obtained. Under these conditions, it was said, the tractor industry has an unexampled opportunity that may never again be available to it.

William Victoria, Muscoda, Wis., was elected president; R. G. Nuss, Madison, Wis., was re-elected secretary and treasurer.

### Postpone Colorado Convention

DENVER, Dec. 12—The annual convention of the Rocky Mountain Auto Trades Association set for this week at Pueblo, Col., has been postponed suddenly as a special precaution in the interest of public health. New developments in the influenza epidemic caused this action. This is the second postponement of the event, and thus far no new

## NEXT WEEK

Complete report of the convention of the National Association of Automobile Accessory Jobbers.

date has been set this time. The officers of the association say that the sentiment of the tradesmen is in favor of waiting until all risk has passed.

Instead of losing interest, however, members throughout Colorado, New Mexico and Wyoming are eagerly looking forward to the convention, and the Pueblo tradesmen are adding to their plans for the kind of a welcome to help insure the adding to their plans for the kind of a welcome to help insure the success of the affair. Highways transport movements will be given a prominent place in the program, with addresses by members of the Highways Transport Committee of the Colorado State Council of Defense. Business Manager Harrison Goldsmith of the trades body predicts that the meeting will be the biggest event of its kind ever held in the entire Rocky Mountain region thus far.

### Wanted—Price Assurance

ST. LOUIS, Dec. 16—This is an important item for all of those who think automobiles are going to sell themselves this winter and next spring.

The St. Louis Ford dealers this week received from the factory a number of sedans and they have been notified that coupes are on the way. All dealers receiving a part of this shipment are hustling to find buyers. One of the dealers said:

*"I don't know just where I am going to place my share, I have no buyers now. People are waiting for a price reduction. If the company would give the public a price assurance policy, it would help some but the buyers are not yet ready to let loose of their money."*

### 8000 Cars in Nova Scotia

HALIFAX, Dec. 13—The Department of the Provincial Secretary has issued a list of owners of motor vehicles in the Province of Nova Scotia. The registry now stands at 8200, which means that in this Province there are at least 8000 automobiles in use, the 200 allowing for cars sold or scrapped and out of commission. The number of new cars this year is between 2500 and 2600. In the Province there are 1726 licensed chauffeurs. More than one-half the cars owned in Nova Scotia are Fords and Chevrolets, and the value of cars in all the Province is over \$100,000,000.

### 126,380 Cars in Washington

OLYMPIA, WASH., Dec. 15—The following statistics on motor vehicle registrations have been issued by the Secretary of State.

Registrations, 1918.....	126,380
Registrations, 1917.....	97,704

## Iowa Ready for Rural Motor Express Service

State Defense Council Organizing Corporations—Dubuque in Lead—200 Trucks in Operation

DES MOINES, IOWA, Dec. 16—The seed of motor truck transportation has found fertile ground in the soil of Iowa. This State now seems about ready to go into the rural express business on a big scale.

The State Council of National Defense is fathering the project and for the purposes of organization has divided the State into five districts, each with a chairman in charge appointed by the highway transport committee of the Council of Defense.

The aim of the council is to organize in the principal centers corporations of local moneyed men to finance the companies to engage in motor transportation.

### Mason City a Pioneer

J. D. Eggleston of Mason City is chairman of the special committee of the Council of Defense. Mason City was a pioneer of Iowa in starting the actual working companies.

Dubuque is among the cities of the State which have taken the lead in the project and already a corporation has been organized there with a capital stock of \$100,000, which is operating a fleet of trucks over twelve routes and visiting sixty-five towns daily.

Council Bluffs has a number of trucks plying daily between that point and Omaha and other towns within a radius of 85 miles. The Council Bluffs companies are receiving particularly hearty support from the farmers of southwestern Iowa, and since Jan. 1 this year have moved 158,000 head of hogs, 18,488 head of cattle and 37,130 head of sheep.

Sioux City is operating nine routes serving sixty-four towns daily. The Mason City service extends over five routes from 90 to 150 miles in length.

### Cheaper Than Freight

Figures which give the motor transportation a very favorable standing as compared to freight hauling are gained from a trial trip made from Mason City, Iowa, to Albert Lea, Minn., a round trip distance of 84 miles. A  $\frac{3}{4}$ -ton capacity truck carrying 2800 lb. and a  $1\frac{1}{2}$ -ton capacity truck carrying 3300 lb. made the round trip in a driving rainstorm in 6 hours and 40 minutes. The expenses for the round trip for both trucks, including overhead, depreciation and interest charges, were \$24.80, whereas the expense of regular freight haulage of the same amount of tonnage would have been \$41.40.

There are 200 trucks operating daily over established routes in Iowa and approximately 170 more operating regularly, but not on a daily basis.

## "Shortage of Labor"? — "No," Says Washington

### Demand Temporarily in Excess of Supply and "Unemployment" Seems a Myth

WASHINGTON, Dec. 16—The demand for labor is in excess of supply according to reports received by the U. S. Employment Service from its Community Labor Boards in 34 States. For the week ended Dec. 6, reports from 6000 employers using more than 3,000,000 workers in 109 manufacturing districts showed the Eastern States with the exception of the Buffalo district suffering from labor shortage. Buffalo has a surplus of workers due to the recent discharge of airplane employees and has within its boundaries 6000 men who are temporarily idle. Reports from 87 concerns in Detroit employing 150,000 men show the supply just equal to the demand. Pennsylvania districts and the New England States report heavy shortages. The Middle West reports supply just equal to demand but heavy increases in labor requirements are expected at Chicago during the next few weeks which are likely to cause a shortage there, which in turn may be offset by the anticipated discharge of workers in the St. Louis district where there have been many plants engaged on war work.

The situation in the Far West is reported generally good with the exception of California. Los Angeles reports a seasonal labor shortage and Oakland records a surplus. Shortages of labor are generally reported from the South.

### Washington Out For Roads

TACOMA, Dec. 15—The Washington State Good Roads Association at its annual session decided to recommend to the state legislature that at least one East and West cross state road be built and also recommended the use of automobile license fees as a basis for a bond issue with which to build roads. H. B. Coffman of Chehalis, Wash., was elected president and Yakima was chosen for the next annual meeting place. Resolutions adopted included a recommendation that a permanent highway fund and a permanent highway maintenance fund must be maintained by the state. Other officers elected were: Percy L. Sinclair, Ilwaco, treasurer; John P. Hartman, King County, chairman; Frank W. Guilbert, Spokane; E. C. Burlingame, Walla Walla; J. H. Smith, Snohomish; Lee Monahan, King; F. H. Haupt, Adams, members executive committee.

### New Bradford Marmon Dealer

BRADFORD, PA., Dec. 14—Four of Bradford's business men have formed a new company to take over the Marmon agency in this city. Their territory will be Bradford, Kane, Mt. Jewett and other towns in the western portion of McKean County. The agency heretofore has been owned by the Smethport Garage Co. and

hereafter will be known as the Marmon-Bradford Co. It will be incorporated. The new owners are: R. H. George, B. F. Hazelton, J. Russell Case and F. B. Nicholas. The latter was a stockholder in the Smethport Garage Co., and has sold out his holdings. The Marmon-Bradford Co. will operate a service station and repairshop in the rear of the present location, 70 Main Street. Accessories, parts and general supplies will be carried.

## Price Changes

### Velie Reduces Prices

NEW YORK, Dec. 16—The Velie Motor Vehicle Co. has reduced the prices of its two models \$75 and \$65 respectively, effective at once. Following are the new and old prices:

Model	New Price	Old Price
38—2 and 5-pass.....	\$1465	\$1540
39—4-pass. sport.....	1975	2040

### Selden Prices Increased

ROCHESTER, Dec. 16—The Selden Truck Sales Co. has revised its price list. Following are the new prices effective Jan. 1:

Model	New Price	Old Price
TXR, 1-ton int.-gear....	\$1900	2100
TWL, 1-ton worm-g....	2200	2100
JCB, 2-ton int.-g.....	2750	2950
JWB, 2-ton worm-g....	3050	2950
NL, 3½-ton worm-g....	3850	3650
DL, 5-ton worm-g.....	5000	4950

### Change of Dates of Automotive Engineers Annual Meeting

NEW YORK, Dec. 14—The time of the winter meeting of the Society of Automotive Engineers, which was originally fixed for January 12-14, has been changed to February 4-6. These latter dates have been set as a matter of convenience to those S. A. E. members who also desire to attend the New York Automobile Show to be held during the first two weeks of February at Madison Square Garden.

This meeting will be the occasion of technical sessions on the different automobiles, and on fuel for internal combustion engines. A half-day session will be devoted to consideration of gasoline, kerosene, benzol and other fuels. Representatives of the Government will present their latest data as to supplies and the results of recent intensive research. The S. A. E. Victory Dinner will be held on February 6 at the Hotel Astor.

### Montreal Helps Children

MONTREAL, Dec. 16—An influential committee of women has been formed with the object of appealing to motorists and others for old rubber tires, and it is hoped to obtain several hundred of tons of old rubber by these means for the benefit of the Children's Memorial Hospital.

President M. J. Stack of the Montreal Automobile Association has placed the offices and organization of the association at the disposal of the committee, and Secretary T. C. Kirby, has given his services and will look after the organization of the work in connection with the campaign.

## Army Plans to Keep All Cars and Trucks

### Rumors That Large Numbers Would Be Sold Declared False —Pool All Service

WASHINGTON, Dec. 15—All passenger cars and standardized trucks now in the possession of the Motor Transport Corps in this country will be retained by the Army, according to an official announcement made here to-day. Non-standardized trucks and Nash Quad trucks will be turned over to the Post Office Department to fill its requirements, or, states the announcement, possibly, in the case of the Nash trucks these will be put on the market. Rumors that the Army would sell large numbers of Dodge, Cadillac and other passenger cars at low prices are erroneous. None of this equipment will be sold.

In its monthly report the Army Motor Service, which is the tax service for the Army in Washington and elsewhere, shows a saving in expense of operation of passenger vehicles in the Army amounting to \$200,000 for November as compared with the expenses of October. Prior to Nov. 1 cars for the use of the Army were assigned to individuals or to various departments.

Now, with the exception of 33 cars assigned to heads of departments, all passenger equipment of the District of Columbia is pooled and motor busses are operated on a sort of taxi system between the various principal buildings. These busses and the passenger cars are for official use only. Thirteen principal stations have been established for them and telephone service can call these cars for official business.

In the month of November, 14,899 trips were made in the District of Columbia covering 106,608 miles. Prior to Nov. 1 the average number of cars in operation per day was 257 passenger cars and 2 busses. Since Nov. 1, 141 passenger cars and 11 busses have operated daily.

The taxi system has been so successful that it will be inaugurated at once in New York, Philadelphia, Chicago, St. Louis and Atlanta.

The motor trucks used by the Army in the United States have also been pooled and are now operated for the benefit of the Army as a whole under the Motor Transport Corps management. The reduction of expense on trucks has not yet been reported but it will be far greater than that on passenger service.

The number of garages for Army vehicles in Washington has been reduced by means of the taxi system and pooling from 16 to 8. Eventually all cars under the Corps will be driven by enlisted men, thereby reducing the wage account.

## NEXT WEEK

Complete report of Convention of  
National Association of Automobile  
Accessory Jobbers

## Optimism Runs Rampant Along Hartford's Row

### Dealers Strong for a Show and Can See Nothing but a Bright Selling Future

HARTFORD, Dec. 15—The past week has marked an improvement in the local selling situation. Dealers are now discussing freely the question of the annual show and most of them feel that it is absolutely necessary. David B. Roberts of the Hartford Buick Co. has just returned to business from Washington, where he has been in the Aircraft Production Bureau. He is very enthusiastic about the future and has this to say:

"On again taking up the business where I left off I am pleased to say that things look mighty encouraging. I think an annual show is very much needed this season and shall certainly propose that one be held. I believe we need a show more this year than we ever did before. We are stocking Buicks just as fast as we can get them. I do not think that we will be troubled by embargoes this season, and if they do come along we will not have to worry about them anyway. We will have enough cars ahead to weather the gale. I think a very prolific season is ahead of us."

L. H. Elmer, of the Elmer Automobile Co., was asked how he found business and said: "It has picked up, in the last week. Buyers have kept away for some time, but now that peace is practically here I feel sure things are going to be very much better."

D. A. Harrington, of the Harrington Hudson Co., said: "The outlook is very good indeed. I feel certain we will have a very comfortable winter business."

M. J. Bliss, of the Heublein Garage Co., said: "What do we think of business? I think I can best answer your question by telling you that we have added another car, the Standard Eight."

William M. Turnbull, of the Colonial Automobile Co., said: "Are we downhearted? No. Very much not, in fact. Why should we be? There is lots of good business, and we are selling Studebakers in very comfortable fashion. The more the merrier."

Edwin H. Richardson, of the Thrall Colton Motor Car Co., said: "Our fall business, despite the war, has been very good, especially in trucks. We find increased interest in closed cars. We have a large number on the way and have been waiting for them patiently."

"We haven't a single complaint to offer," said William H. Vinal, salesman for Russell P. Taber. "Say, do you know where you can scare up a few experienced salesmen? Send them along; we need them. Plenty of cars? Certainly, and a good market for them, too."

H. P. Seymour, president of the Universal Auto Co., said: "Things are coming our way. Business is very good, thank you."

A. C. Hine, of the A. C. Hine Co., replied in answer as to how business was going: "It isn't going, it's coming. We are getting our share. Howard D. Graves, who used to be with Packard, has taken charge of the Cole end."

Robert J. Flynn, of the recently formed Hartford Scripps-Booth Co., said: "They told us we were crazy to take on a strange line in war time. We have shown them something. F. L. Thorpe has just come with us. We have been all over our territory. We feel very much encouraged."

George D. Knox, the Peerless distributor, replied: "We are getting our share. There is more interest and more prospects. I think a show will help us."

### Receiver for Nilson Tractor

MINNEAPOLIS, Dec. 16—The Nilson Tractor Co. has been placed in the hands of a friendly receiver at the request of its own stockholders and directors. The court has appointed M. J. Osborn, who has been general manager of the company. The receivership is a temporary matter and is the first step in a refinancing and reorganization plan from which the company hopes to emerge bigger and stronger.

### Studebaker Issues \$15,000,000 Notes

NEW YORK, Dec. 16—The Studebaker Corp. has completed the financing plan which has been on the boards for several weeks and this takes the form of an issue of \$15,000,000 in 7 per cent serial notes maturing in various amounts from Jan. 1, 1921, to Jan. 1, 1929.

**"What the country chiefly needs is that all possible means of transportation should be developed, its railways, its waterways, its highways and its countryside roads."—President Wilson, from Address to Congress, Dec. 2, 1918.**

### Selden Declares Dividend

ROCHESTER, N. Y., Dec. 14—At a meeting of the board of directors of the Selden Truck Sales Co. held at the general offices a dividend of 5 per cent was declared on the first preferred stock, payable Jan. 2, 1919. At the same meeting a quarterly dividend of 2 per cent was also declared. This latter dividend is payable to stockholders of record as of Jan. 2, 1919. It is stated that shipments of Selden trucks during the month ending Dec. 7 were greater by 28 per cent than those of any month during the past two years.

### Montreal to Have Big Show

MONTREAL, Dec. 16—Although the Montreal Automobile Trade Association has decided not to have a show, an exposition will nevertheless be held in this city. It will be conducted independently of the association but under the management of Thomas C. Kirby, the association secretary and manager of previous Montreal shows.

It will be held April 5 to 12 in the Victoria Rink, and will include cars and trucks, motorcycles, motor boats, aeroplanes, accessories, tractors, farm lighting plants and allied products.

The show will be run in aid of the Montreal Soldiers' Wives' League, and a well organized plan of ticket selling has already been inaugurated.

## Philadelphia "Jubilee" Week Really Sold Cars

### Dealers Happy Over Results of Innovation—Business Being Revised Upward

PHILADELPHIA, Dec. 15—Jubilee week in the automobile and allied trades here has been most satisfactory, according to members of the committee who had charge of the arrangements and virtually all of the seventy concerns which participated by keeping open house every night and decorating in honor of the "back-to-business" basis of the trades.

The occasion is deemed more "institutional" and "missionary" than a mere desire to obtain immediate business results, but many prospects were obtained and sales in some instances palpably "boosted" during the seven-day carnival. One house reports 65 inquiries in one day and another 9 positively good prospects, and so on down the line. Hardly a firm but profited either in the number of inquiries or general interest aroused. The public now knows what the motor car men knew before—that business is being revised upward rapidly.

Several concerns celebrated jubilee week by moving into handsome new quarters, which they trimmed lavishly with roses, ferns, palms and basket bouquets of various sorts—notably the Overland-Harper Co., from South Twenty-first Street to near the entrance to Fairmount Parkway; the Thornton-Fuller Automobile Co., from 2037 Market Street to Fairmount Parkway below 18th Street and the Winton Co., from 246 North Broad Street to Twenty-fourth Street and Fairmount Avenue, one square from the main entrance to the Park.

There seems to be a fair stock of cars on hand and if buying starts in earnest, as indications point, business soon will have reached the pre-war level.

### Completing Arrangements for St. Louis Show

ST. LOUIS, Dec. 16—A renewal of the influenza ban has made it impossible for the St. Louis Automobile Manufacturers' and Dealers' Association to carry through the project to hold a meeting to discuss the show project. The accessory dealers have been invited to this indefinite meeting. However, it is said that those dealers objected to a show at the recent meeting and that the decision for a show will be unanimous when the meeting is held. In accord with this understanding Association Secretary R. E. Lee is going ahead with the preliminary arrangements.

### Albany Show Feb. 15-22

ALBANY, N. Y., Dec. 16—The Albany Automobile Dealers' Association will have its automobile show in the State Armory the week of Feb. 15 to 22. The association is planning to make the show greater than any of the previous annual exhibits and many new and interesting features are being arranged.

## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

George A. Simmons, for years an executive of the Durant-Dort Carriage Co. and the Dort Motor Car Co., Flint, has been made manager of the Dort Sales Co., Flint, succeeding C. L. Britt. Simmons is succeeded as superintendent of the Dort plant by A. F. Jenkins, who for the last year has been his assistant. C. L. Britt, the retiring manager of the Dort Sales Co., will resume his connection with the John Deere Plow Co., St. Louis, from which he resigned to come to Flint.

C. H. Dunlap, vice-president of the E. A. Nelson Motor Car Co., Detroit, has completed his duties in connection with the motor transport training detachment at Valparaiso, Ind., and has returned to the Nelson organization.

Charles B. Ennis, sales manager of the Anderson Motor Sales Co., Charlotte, N. C., has been made general manager of the same company.

A. H. Zimmerman has resigned as treasurer and director of the Continental Motors Corp., Detroit. G. W. Yeoman, director of sales and advertising, has been made treasurer, and W. R. Angell, secretary, has been elected assistant treasurer and a director.

Charles A. Marlen, general manager of the One Wheel Truck Co. in St. Louis, has resigned and will announce a future connection shortly.

R. C. Fleming of St. Louis has been named manager of the Kansas City branch, just established, of the Security Auto Theft Signals Co.

E. I. Danaher, formerly secretary of the Newell Motor Car Co., St. Louis, has been released from the machine gun service in the U. S. Army and will rejoin the Newell Co. Jan. 1.

Gard Gale has accepted the general sales managership of the Commerce Motor Truck Co., Detroit.

T. T. Fauntleroy has been appointed sales engineer for the Lakewood Engineering Co., Cleveland, with headquarters at 1034 Widener Bldg., Philadelphia. He was formerly New York branch manager for the Gurney Ball Bearing Co. and latterly has been manager of the central sales district for the same company.

Ward C. Gifford, who in the past few months has become widely known in the automotive industry through his work for the National Automobile Dealers' Association, is to be permanently identified with this industry. On January 1 he takes the management of the E. E. Peake Realty & Development Co. of Kansas City, the institution of which the president of the National Association of Show Managers is the head.

Paul L. Odle has joined the Parrett Tractor Co., Chicago. He was formerly associated with both the Republic and Denby Motor Truck companies.

E. R. Fosdick, Spokane, pioneer automobile man in Washington, has been made manager of the new branch of the Sunset Motors Co., distributors of Cadillac, Hupmobile and Maxwell lines in the Inland Empire.

Prescott C. Ritchie, Western representative of the Westinghouse Automobile Equipment Department, moved his headquarters from Indianapolis to the Conway Building, Chicago.



DON E. BAILEY

### Don E. Bailey Passes Away

SAN FRANCISCO, Dec. 16—Don E. Bailey, for ten years intimately connected with the Bailey-Drake Co., which he founded, died Nov. 29 from pneumonia following an attack of influenza. Mr. Bailey organized the Bailey Special Co. in San Francisco and this was later changed to the Don E. Bailey Co. In 1914 Mr. Drake, then general sales manager of the Remington Arms Union Metallic Cartridge Co., resigned that position to enter the firm, when the name was changed to Bailey-Drake Co. At present the company has branches in San Francisco, Seattle and Kansas City, the principal headquarters having recently been moved from San Francisco to Chicago.

### Rhode Is Vice-President of Wire Wheel Corp.

O. J. Rhode, formerly manager of the service department of the Wire Wheel Corp. of America, controlling all company branches and export for the past 18 months, has been promoted to the office of vice-president and general manager. He will be located at Buffalo.

### Changes in Continental Motors Corp. Personnel

A. H. Zimmerman has resigned as treasurer and as a director of the Continental Motors Corp., Detroit. G. W. Yeoman, director of sales and advertising, has been made treasurer, and W. R. Angell, secretary, has been elected assistant treasurer and a director.

Robert L. McCrea, St. Louis, who has sold Packards for 14 years, has taken an executive position with the Cadillac Automobile Co. of that city, succeeding H. W. Spalding, who takes charge of the Chevrolet retail distribution in St. Louis.

## N. A. D. A. Supporting Car Thief Catchers

### Manager Moock Stimulates Efforts of Police to Put an End to the Trouble

ST. LOUIS, Dec. 16—Last week two St. Louis detectives went down in the Southeastern part of the state and returned with nine motor cars that recently had been stolen in this city. All of the buyers named a St. Louis saloon keeper as the man who got the money from them. Four of the cars were Chandlers.

Harry G. Moock, business manager of the N. A. D. A., has been giving some attention to the local car stealing situation and on two occasions when car thieves were given exceptional sentences he has written notes of congratulation to the prosecutor. Also, when detectives appear to have done unusual work, he writes the best wishes of the N. A. D. A. for a continuance of the work. Already he has evidence that this course pays. Verne Lacy, one of the prosecutors, wrote back:

"I will so conduct myself as to be able to merit future appreciation of my effort."

"These men are showing an interest in my letters," said Moock, "and I know that they, like other human beings, like to know that their work is appreciated. While I have written such letters only in St. Louis, I think the field for such commendation is nationwide. I will be pleased to congratulate any officer any place in the United States who does good work along this line. If any local association secretary or any motor car dealer will send me the facts in a deserving case, I will be quick to write a letter of congratulation to the proper persons. I believe this is one of the best methods of stirring the officials to activity and I am more than willing to do my part."

### Vesper to Attend Kansas State Dealers' Meeting

ST. LOUIS, Dec. 12—F. W. A. Vesper, president of the N. A. D. A., who attended the Atlantic City meeting last week, will attend the meeting of the Kansas State Automobile Dealers' Association Dec. 19 at Topeka.

### Davis Made Executive Secretary of Missouri Transport Division

ST. LOUIS, Dec. 16—J. P. Davis, recently assistant engineer of the Missouri State Highway Board, has been made executive secretary of the Highways Transport Division of the Missouri Division of the National Council of Defense. Davis will undertake to carry through the projects for motor transport begun by A. C. McKibben in several rural communities. He is arranging for a conference with national bodies regarding possible use of some of the war trucks for the establishment of the proposed lines.

## Los Angeles Dealers Set Dec. 25-Jan. 1 for Show

LOS ANGELES, Dec. 16—At a meeting of the dealers association it was voted to hold a show the week of Dec. 25 to Jan. 1. As yet the place has not been determined upon, as there is no structure in the city large enough to accommodate the show, and a tent arrangement will most likely have to be used. It has been suggested that one block of a little-used street centrally located be used for the show, and the city may give its consent.

The motor car trade in southern California needs the stimulating influences of a show. Upon that subject the dealers are agreed. Dealers are stocked up with all the cars they could get from the factories in anticipation of a stop-production order and now they fear that resumption of production will catch them with these cars on hand and unsold.

It developed at the recent meeting of the association that the motor car business needs a bit of "jazz" put into it, and the best way to inject this pep is by engendering a more liberal buying spirit among the public.

Southern California has been fortunate in the production of bumper crops during 1918, and wherever there was a slight shortage this has been more than offset by the increased demand and higher prices. November was a record breaking month for bank clearings. Everything else indicates the public should be in a buying frame of mind, but they are not spending it for motor vehicles, so it is up to the dealers to jar the shekels loose, and this they intend to undertake through the medium of the show. The show is to be followed later by a series of competitive contests, endurance or economy runs and most anything else that dealers can think of that will redirect public attention toward motor cars.

### Biggest Idea in Electrical Testing Co.

(Continued from page 36)

work in the new building. Everything is arranged with a view to avoid confusion and unnecessary delays in rendering service.

Just as soon as a job is finished, no matter of what nature, a report is turned in to the office so that when the owner wishes to inquire about it the information will be found at the office and not in the shop. If the work is not finished it will be necessary for him to call the electrical or battery department to inquire about his particular job.

When a customer calls for his job he must show his claim-check at the office window, at which time it will be either paid or O.K.'d and then presented at the window of the battery or electrical department, depending on what he is to get, and the goods will be delivered.

Every new man is carefully trained before he is given any particular work to do. No matter if he has had electrical experience, he is given a thorough training covering the nature of the work and instructions to do the work as the company wants it done.

## Making Motor Mechanics of Women



**T**HE Women's Motor Vocational Corps, New York City, has taught many women about what goes on inside a motor and how to correct little troubles. Mrs. Harper, the organizer of the corps, is standing at the extreme right

### J. F. Adshead "Flu" Victim

ALBERTA, CANADA, Dec. 15—J. D. Adshead, general manager of the J. D. Adshead Co., distributor for the La Crosse Tractor Co., in the Province of Alberta, died Dec. 11 from Spanish influenza.

### Westinghouse Unit Light and Power Plant

(Continued from page 14)

frame is steel and all wearing parts are liberally proportioned. The bearings are large and of the oil-ring type, and a sliding base is furnished on which the generator may be moved, permitting the tightening of the driving belt. A pressed-paper pulley is supplied with the generator. The storage battery is the lead type and has sixteen cells.

The control panel has three different arrangements of the circuits to suit the requirements of the operator, as conditions change from time to time. The load may be operated from battery only, from generator only or from the generator and battery operating together. The automatic cut-out and cut-in switch on the control panel maintain a steady voltage on the battery when charging. The ampere-hour meter on the control panel shows at all times the amount of energy available in the storage battery.

The outfits are shipped in substantial crates with all equipment connected ready for operation.

### Director of Bureau of Public Roads Dies Suddenly

CHICAGO, Dec. 14—Logan Waller Page, director of the Bureau of Public Roads, died suddenly of heart disease. He had arrived to take part in the Highway Industries Association convention. Mr. Logan was a pioneer in highway work and the inventor of machines used in road improvement.

## Skilled Workers Needed for Tractor Operation

WINNIPEG, Dec. 16—"More than 80 per cent of the farm tractors sold in Western Canada during the past two years are light tractors of less than 25 horsepower," said Prof. L. J. Smith of the Manitoba Agricultural college.

When asked if the light tractor would permanently supplant the heavier type, he replied: "That will depend very much on the operators." Prof. Smith, who has recently visited many of the tractor firms in the south, did not wish to discuss the relative values of the light high speed motor and the heavier horizontal type, but said that one fact could not be over-emphasized. "These high speed motors will require more careful attention than the low speed engine. The average motor will need to be thoroughly overhauled twice a year. This will require more careful adjustment and better mechanical skill than has hitherto been demanded of the tractor operator. He must be very careful in lubricating and must never allow loose bearings and small adjustments to go without immediate attention."

The department of agricultural engineering—of which Prof. Smith is head—will lay great emphasis on this phase of the work this year, both with the regular students and in the special engineering short course. A number of high speed four-cylinder vertical motors have been produced and students will be required to knock down, assemble, adjust and operate the various types.

Operators who have had experience in overhauling automobile engines should have little difficulty in adjusting the high speed tractor motor, but they must never forget that the tractor engine gets much harder usage than the automobile and should therefore be more frequently adjusted if it is to give satisfactory service.



## Coming Events

### Motor Shows

Los Angeles, Cal.	Automotive Exposition	Dec. 25-Jan. 1
Detroit, Mich.	Detroit Automobile Dealers' Assn. H. H. Stuart, Manager.	January
Milwaukee, Wis.	Eleventh Annual, Milwaukee Automobile Dealers' Inc., Auditorium. Bart J. Ruddle, Manager.	Jan. 24-30
Chicago	Passenger Cars, Coliseum	Jan. 25-Feb. 1
New York	Trucks, Coliseum	Feb. 3-6
	Automobile Dealers' Assn. Charles A. Stewart, Manager. (Hotel Woodward, Broadway and 55th St.)	Feb. 1-15
Albany, N. Y.	Albany Automobile Dealers' Assn. State Armory.	Feb. 15-22
Louisville, Ky.	Louisville Auto Dealers' Assn.	Feb. 15-22
Newark, N. J.	N. J. Auto Exhibition Co. Claude Holgate, Manager.	Feb. 15-22
Minneapolis, Minn.	Northwestern Automotive Exposition, Overland Building. Walter B. Willmot, Manager.	Feb. 15-22
Des Moines, Ia.	Tenth Annual, Des Moines Automobile Dealers' Assn. C. G. Van Vleet, Manager.	Feb. 17-22
So. Bethlehem, Pa.	Lehigh Valley Auto Shows Co. J. L. Elliott, Manager.	Feb. 17-24
	Passenger cars	Feb. 24-27
St. Louis, Mo.	St. Louis Auto Mfrs. and Dealers' Assn. Robert E. Lee, Manager.	Feb. 24-28
Kansas City, Mo.	Kansas City Motor Dealers' Assn. E. E. Peake, Manager.	Feb. 24-Mar. 1
Grand Rapids, Mich.	Grand Rapids Automobile Business Assn. E. T. Conlon, Manager.	February
Philadelphia, Pa.	Philadelphia Automobile Trade Assn., A. E. Maltby, Manager.	March
	Passenger cars	March
	Motor Truck Assn.	March
Columbus, O.	Trucks	Following week
	Columbus Automobile Show. Co., Memorial Building, W. W. Freeman, Manager.	Mar. 3-8
Buffalo, N. Y.	Buffalo Automobile Dealers' Assn.	Mar. 3-8
San Francisco, Cal.	Motor Car Dealers' Assn. G. A. Wahlgreen, Manager.	Mar. 1-10
Syracuse, N. Y.	Syracuse Automobile Dealers' Assn. Harry T. Gardner, Manager.	Mar. 10-15
Boston, Mass.	Boston Automobile Dealers' Assn. Chester I. Campbell, Manager.	Mar. 15-22
Brooklyn	Brooklyn Motor Vehicle Dealers' Assn. I. C. Kirkham, Manager.	Mar. 22-29
	Passenger cars	Mar. 22-29
	Trucks	Apr. 1-5
Trenton, N. J.	Trenton Auto Trade Assn. John L. Brock, Manager.	3rd week March
Great Falls, Mont.	Montana Automobile Distributors' Assn.	March
Chicago	Chicago Automobile Trade Assn.	Jan. 25-Feb. 1
Pittsburgh	Automobile Dealers' Assn. of Pittsburgh. John J. Bell, Manager.	March
Great Falls, Mont.	Montana Automobile Dealers' Assn.	March
Syracuse, N. Y.	Syracuse Automobile Dealers' Assn. Harry T. Gardner, Manager.	March
Utica, N. Y.	Utica Motor Dealers' Assn. W. W. Garabrant, Manager.	March
Harrisburg, Pa.	Harrisburg Motor Dealers' Assn. J. Clyde Myton, Manager.	March
Cleveland, O.	Cleveland Auto Show Co. Fred H. Caley, Manager.	Late March or early April
Montreal, Can.	National Motor Show of Eastern Canada. Victoria Rink. T. C. Kirby, Manager.	April 5-12
Bridgeport, Conn.	Auspices of City Battalion. B. H. Stelber, Manager.	Not Decided
Hartford, Conn.	Hartford Automobile Dealers' Assn.	Not Decided
Kansas City, Mo.	Kansas City Motor Dealers' Assn. E. E. Peake, Manager.	Not Decided

### Tractor Shows

Kansas City, Mo.	Fourth Annual Tractor Show, Union Station Plaza	Feb. 10-15
Wichita, Kan.	Kansas City Tractor Club. Guy H. Hall, Sec. Annual Mid-west Tractor and Thresher Show. Wichita Tractor and Thresher Club. Forum.	Feb. 18-22

### Meetings

Chicago, Ill.	Twelfth Annual Meeting. American Society of Agricultural Engineers. Hotel Sherman. J. W. Dickinson, Secy., Ohio State University, Columbus.	Dec. 30-Jan. 1
Chicago	Convention National Association of Automobile Accessory Jobbers. General Sessions	Dec. 16, 17, 18
Chicago	Annual meeting National Automobile Dealers' Association, La Salle Hotel.	Dec. 17-18
New York	Meeting, Society Automotive Engineers	Jan. 28-29
New York	Eastern Division Meeting, National Automobile Dealers' Association.	Feb. 4-6
New York	Victory Dinner at Hotel Astor	Feb. 5
New York	Sixteenth Annual Convention. American Road Builders' Assn.	Feb. 25-28

### Race

Indianapolis, Ind.	500-Mile Sweepstakes. Indianapolis Speedway.	May 30
--------------------	---	--------

### Distribute Osgood from St. Louis

ST. LOUIS, Dec. 16—All distribution of the Osgood headlight lens has been removed from Chicago to this city, according to Charles W. Price, for the last year sales and advertising manager for the Osgood Lens & Supply Co. Price has returned here and has been again elected president of the Auto Devices Co., which place he held until he was called to the service of the Osgood company.

### Columbus Show March 3

COLUMBUS, Dec. 15—The annual Columbus show will be held in the Memorial Building the week starting March 3. The show has been named the "Victory Show," and plans are made for the most elaborate display of passenger cars and commercial vehicles ever shown in the Buckeye capital. W. W. Freeman has been engaged to act as manager of the show. The general arrangements are in charge of a committee composed of A. B. Coates, I. P. Madden and H. K. Dobson.

### Toliver Company Reorganized

DENVER, COL., Dec. 15—The Toliver Tube & Tire Co. has been entirely reorganized. The new officers and directors are: Charles A. Rogers, president; Frank L. Joslin, treasurer; A. C. Munson, secretary; L. G. Dupton, director and general sales agent; E. R. Conrad, director and general manager. The office of vice-president has not yet been filled.

### Tractor Schools

#### Auspices New York State Food Commission

Plattsburg	Dec. 16-20
Saratoga	Jan. 6-10
Newark	Jan. 6-10
Cattaraugus	Jan. 13-17
Trumansburg	Jan. 13-17
Foughkeepsie	Jan. 20-24
Syracuse	Jan. 20-24
Hornell	Jan. 27-31
Watertown	Jan. 27-31
Middletown	Feb. 3-7
Rochester	Feb. 3-7
Warsaw	Feb. 17-21
Penn Yan	Feb. 17-21
Binghamton	Feb. 24-28
Buffalo	Feb. 24-28
Batavia	Mar. 3-7
Canandaigua	Mar. 3-7
Oneonta	Mar. 10-14
Mt. Morris	Mar. 10-14

### Avery Service Schools

Lincoln, Neb.	Dec. 19-21
Madison, Iowa	Jan. 9-11
Des Moines, Iowa	Jan. 13-15
Sioux Falls, S. D.	Jan. 16-18
Aberdeen, S. D.	Jan. 20-22
Minneapolis, Minn.	Jan. 23-25
Fargo, N. D.	Jan. 27-29
Grand Forks, N. D.	Jan. 30-Feb. 1
Billings, Mont.	Feb. 3-5
Peoria, Ill.	Feb. 13-15
Indianapolis, Ind.	Feb. 17-19
Columbus, Ohio	Feb. 20-22

### Case Service Schools

Lincoln-Salt Lake City	Dec. 17-21
Minneapolis-Sioux Falls-Amarillo	Jan. 7-11
Des Moines-Watertown-Dallas	Jan. 14-17
Crowley	Jan. 21-24
Fargo-Harrisburg-Nashville	Jan. 28-31
Calgary-Syracuse-Louisville	Feb. 4-7
Edmonton-New York-Columbus	Feb. 11-14
Saskatoon-Boston-Indianapolis	Feb. 18-21
Regina-Lansing-Peoria	Feb. 25-28
Winnipeg-Madison-Chicago	Mar. 4-7
Oshkosh	Mar. 11-14

Farm Tractors

MOTOR WORLD GUIDE

Farm Tractors

Trade Name	Rating	Weight	Price	Traction Type	No. of Wheels or Crawlers	Engine Make	Cylinder Number	Bore and Stroke	Fuel	Normal Plov Capacity
Acme	12-25	6,000	\$1800	W	2	Beaver	4	4 1/2 x 6	G or K	2
Acme	12-25	6,800	2250	C	2	Beaver	4	4 1/2 x 6	G or K	2
Allis-Chalmers	10-18	4,800	1250	W	2	Ow	4	4 1/2 x 6	G or K	2
Allis-Chalmers	14-28	5,000	1500	W	2	Ow	4	4 1/2 x 6	G or K	2
Allis-Chalmers	15-30	4,975	1500	W	2	Ow	4	4 1/2 x 6	G or K	2
Andrew	12-20	5,250	1000	W	2	Veeco	4	4 1/2 x 6	G or K	2
Appleton	12-20	4,900	1000	W	2	Buda	4	4 1/2 x 6	G or K	2
Atlas	16-26	5,100	1750	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Aultman-Taylor	15-30	7,800	1750	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Aultman-Taylor	22-45	12,500	2000	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Aultman-Taylor	30-60	23,000	2000	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Austin	12-20	750	500	W	2	LeRoi	4	3 1/2 x 4	G or K	1
Austin	12-20	3,500	1000	W	2	LeRoi	4	4 1/2 x 6	G or K	2
Austin	15-30	4,500	1000	W	2	LeRoi	4	4 1/2 x 6	G or K	2
Austin	20-40	4,500	1000	W	2	LeRoi	4	4 1/2 x 6	G or K	2
Auto-Tiller	75-125	25,000	365	W	2	Automatic	4	4 1/2 x 6	G or K	2
Avery	8-16	2,150	850	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Avery	8-16	2,150	850	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Avery	12-25	7,500	1000	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Avery	18-36	9,250	1000	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Avery	25-50	12,500	1000	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Avery	40-80	22,000	1000	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Bates Steel Mule	12-20	4,300	1445	C	2	LeRoi	4	4 1/2 x 6	G or K	2
Best Track Pull	6-10	3,200	1445	C	2	LeRoi	4	4 1/2 x 6	G or K	2
Best Track Pull	11-4	285	285	C	2	LeRoi	4	4 1/2 x 6	G or K	2
Best Track Pull	12-20	4,500	1600	C	2	Waukesha	4	4 1/2 x 6	G or K	2
Best Track Pull	20-40	11,000	4100	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Best Track Pull	38-75	28,000	5850	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Blumberg	9-18	2,450	850	W	2	Ow	4	4 1/2 x 6	G or K	2
Blumberg	12-24	3,400	1250	W	2	Ow	4	4 1/2 x 6	G or K	2
Boring	20-30	3,550	1485	W	2	Ow	4	4 1/2 x 6	G or K	2
Boring	15-30	6,900	1000	W	2	Ow	4	4 1/2 x 6	G or K	2
Boss	20-40	7,000	1000	W	2	Ow	4	4 1/2 x 6	G or K	2
Brilliant	12-22	4,900	5500	C	2	Automatic	4	4 1/2 x 6	G or K	2
Buckeye	16-30	21,000	5500	C	2	Automatic	4	4 1/2 x 6	G or K	2
Buckeye	24-45	25,000	6500	C	2	Automatic	4	4 1/2 x 6	G or K	2
Bull	12-24	5,000	1075	W	2	Toro	4	4 1/2 x 6	G or K	2
Case	10-18	3,400	1225	W	2	Ow	4	4 1/2 x 6	G or K	2
Case	10-20	5,000	1325	W	2	Ow	4	4 1/2 x 6	G or K	2
Case	15-27	5,600	1600	W	2	Ow	4	4 1/2 x 6	G or K	2
Case	20-40	13,700	3000	W	2	Ow	4	4 1/2 x 6	G or K	2
Case	30-60	25,800	3500	W	2	Ow	4	4 1/2 x 6	G or K	2
Case	40-80	35,000	3500	W	2	Ow	4	4 1/2 x 6	G or K	2
Cleveland	12-25	3,200	1855	W	2	Waukesha	4	4 1/2 x 6	G or K	2
C.O.D.	12-25	6,500	1395	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Coleman	16-30	7,000	1750	W	2	Waukesha	4	4 1/2 x 6	G or K	2
Creeping Grip	20-40	2840	2840	W	2	Continental	4	4 1/2 x 6	G or K	2
Dill	20-40	4,200	2840	W	2	Continental	4	4 1/2 x 6	G or K	2
E-B	9-16	4,200	2840	W	2	Continental	4	4 1/2 x 6	G or K	2
E-B	12-20	4,355	2840	W	2	Continental	4	4 1/2 x 6	G or K	2
E-B	12-20	6,500	2840	W	2	Continental	4	4 1/2 x 6	G or K	2
E-B	20-35	9,700	2840	W	2	Continental	4	4 1/2 x 6	G or K	2
E-B	40-65	23,000	2840	W	2	Continental	4	4 1/2 x 6	G or K	2
Elgin	9-18	2,900	\$1075	W	2	Buda	4	4 1/2 x 6	G or K	2
Elgin	12-25	3,500	1385	W	2	Buda	4	4 1/2 x 6	G or K	2
Fagel	10-20	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	15-25	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	20-40	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	25-50	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	30-60	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	35-70	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	40-80	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	45-90	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	50-100	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	55-110	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	60-120	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	65-130	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	70-140	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	75-150	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	80-160	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	85-170	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	90-180	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	95-190	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	100-200	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	105-210	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	110-220	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	115-230	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	120-240	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	125-250	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	130-260	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	135-270	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	140-280	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	145-290	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	150-300	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	155-310	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	160-320	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	165-330	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	170-340	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	175-350	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	180-360	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	185-370	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	190-380	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	195-390	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	200-400	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	205-410	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	210-420	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	215-430	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	220-440	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	225-450	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	230-460	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	235-470	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	240-480	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	245-490	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	250-500	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	255-510	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	260-520	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	265-530	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	270-540	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	275-550	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	280-560	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	285-570	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	290-580	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	295-590	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	300-600	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	305-610	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	310-620	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	315-630	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	320-640	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	325-650	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	330-660	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	335-670	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	340-680	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	345-690	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	350-700	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	355-710	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	360-720	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	365-730	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	370-740	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	375-750	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	380-760	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
Fagel	385-770	3,000	1500	W	2	Overland	4	4 1/2 x 6	G or K	2
F										

# Trucks

[illegible]

Name and Model	Tires	Capacity	Price	Cylinder Bore	Tires	F.	R.
Studebaker	7	1	91400	4-31x5	35x5	35x5	35x5
Sullivan	F 1	1	2350	4-31x5	35x5	35x5	35x5
Sullivan	E 1	1	3150	4-31x5	35x5	35x5	35x5
Superior	A 1	1	1600	4-31x5	35x5	35x5	35x5
Superior	C 2	2	2200	4-31x5	35x5	35x5	35x5
Tiffin	A 1	1	1100	4-31x5	35x5	35x5	35x5
Tiffin	GW 1	1	2075	4-31x5	35x5	35x5	35x5
Tiffin	MW 2	2	2750	4-31x5	35x5	35x5	35x5
Tiffin	PW 3	3	3000	4-31x5	35x5	35x5	35x5
Tiffin	RW 6	6	4850	8-31x5	35x5	35x5	35x5
Tiffin	SW 6	6	4850	8-31x5	35x5	35x5	35x5
Titan	5	5	4300	4-31x5	35x5	35x5	35x5
Titan	5	5	5150	4-31x5	35x5	35x5	35x5
Traffic	2	2	1395	4-31x5	35x5	35x5	35x5
Transport Tractor	N 5	5	2750	4-31x5	35x5	35x5	35x5
Triangle	A 1	1	2185	4-31x5	35x5	35x5	35x5
Triangle	B 2	2	2850	4-31x5	35x5	35x5	35x5
United	AX 1	1	4-31x5	35x5	35x5	35x5	35x5
United	AX 2	2	4-31x5	35x5	35x5	35x5	35x5
United	AX 3	3	4-31x5	35x5	35x5	35x5	35x5
United	AX 4	4	4-31x5	35x5	35x5	35x5	35x5
United	AX 5	5	4-31x5	35x5	35x5	35x5	35x5
United	AX 6	6	4-31x5	35x5	35x5	35x5	35x5
United	AX 7	7	4-31x5	35x5	35x5	35x5	35x5
United	AX 8	8	4-31x5	35x5	35x5	35x5	35x5
United	AX 9	9	4-31x5	35x5	35x5	35x5	35x5
United	AX 10	10	4-31x5	35x5	35x5	35x5	35x5
United	AX 11	11	4-31x5	35x5	35x5	35x5	35x5
United	AX 12	12	4-31x5	35x5	35x5	35x5	35x5
United	AX 13	13	4-31x5	35x5	35x5	35x5	35x5
United	AX 14	14	4-31x5	35x5	35x5	35x5	35x5
United	AX 15	15	4-31x5	35x5	35x5	35x5	35x5
United	AX 16	16	4-31x5	35x5	35x5	35x5	35x5
United	AX 17	17	4-31x5	35x5	35x5	35x5	35x5
United	AX 18	18	4-31x5	35x5	35x5	35x5	35x5
United	AX 19	19	4-31x5	35x5	35x5	35x5	35x5
United	AX 20	20	4-31x5	35x5	35x5	35x5	35x5
United	AX 21	21	4-31x5	35x5	35x5	35x5	35x5
United	AX 22	22	4-31x5	35x5	35x5	35x5	35x5
United	AX 23	23	4-31x5	35x5	35x5	35x5	35x5
United	AX 24	24	4-31x5	35x5	35x5	35x5	35x5
United	AX 25	25	4-31x5	35x5	35x5	35x5	35x5
United	AX 26	26	4-31x5	35x5	35x5	35x5	35x5
United	AX 27	27	4-31x5	35x5	35x5	35x5	35x5
United	AX 28	28	4-31x5	35x5	35x5	35x5	35x5
United	AX 29	29	4-31x5	35x5	35x5	35x5	35x5
United	AX 30	30	4-31x5	35x5	35x5	35x5	35x5
United	AX 31	31	4-31x5	35x5	35x5	35x5	35x5
United	AX 32	32	4-31x5	35x5	35x5	35x5	35x5
United	AX 33	33	4-31x5	35x5	35x5	35x5	35x5
United	AX 34	34	4-31x5	35x5	35x5	35x5	35x5
United	AX 35	35	4-31x5	35x5	35x5	35x5	35x5
United	AX 36	36	4-31x5	35x5	35x5	35x5	35x5
United	AX 37	37	4-31x5	35x5	35x5	35x5	35x5
United	AX 38	38	4-31x5	35x5	35x5	35x5	35x5
United	AX 39	39	4-31x5	35x5	35x5	35x5	35x5
United	AX 40	40	4-31x5	35x5	35x5	35x5	35x5
United	AX 41	41	4-31x5	35x5	35x5	35x5	35x5
United	AX 42	42	4-31x5	35x5	35x5	35x5	35x5
United	AX 43	43	4-31x5	35x5	35x5	35x5	35x5
United	AX 44	44	4-31x5	35x5	35x5	35x5	35x5
United	AX 45	45	4-31x5	35x5	35x5	35x5	35x5
United	AX 46	46	4-31x5	35x5	35x5	35x5	35x5
United	AX 47	47	4-31x5	35x5	35x5	35x5	35x5
United	AX 48	48	4-31x5	35x5	35x5	35x5	35x5
United	AX 49	49	4-31x5	35x5	35x5	35x5	35x5
United	AX 50	50	4-31x5	35x5	35x5	35x5	35x5
United	AX 51	51	4-31x5	35x5	35x5	35x5	35x5
United	AX 52	52	4-31x5	35x5	35x5	35x5	35x5
United	AX 53	53	4-31x5	35x5	35x5	35x5	35x5
United	AX 54	54	4-31x5	35x5	35x5	35x5	35x5
United	AX 55	55	4-31x5	35x5	35x5	35x5	35x5
United	AX 56	56	4-31x5	35x5	35x5	35x5	35x5
United	AX 57	57	4-31x5	35x5	35x5	35x5	35x5
United	AX 58	58	4-31x5	35x5	35x5	35x5	35x5
United	AX 59	59	4-31x5	35x5	35x5	35x5	35x5
United	AX 60	60	4-31x5	35x5	35x5	35x5	35x5
United	AX 61	61	4-31x5	35x5	35x5	35x5	35x5
United	AX 62	62	4-31x5	35x5	35x5	35x5	35x5
United	AX 63	63	4-31x5	35x5	35x5	35x5	35x5
United	AX 64	64	4-31x5	35x5	35x5	35x5	35x5
United	AX 65	65	4-31x5	35x5	35x5	35x5	35x5
United	AX 66	66	4-31x5	35x5	35x5	35x5	35x5
United	AX 67	67	4-31x5	35x5	35x5	35x5	35x5
United	AX 68	68	4-31x5	35x5	35x5	35x5	35x5
United	AX 69	69	4-31x5	35x5	35x5	35x5	35x5
United	AX 70	70	4-31x5	35x5	35x5	35x5	35x5
United	AX 71	71	4-31x5	35x5	35x5	35x5	35x5
United	AX 72	72	4-31x5	35x5	35x5	35x5	35x5
United	AX 73	73	4-31x5	35x5	35x5	35x5	35x5
United	AX 74	74	4-31x5	35x5	35x5	35x5	35x5
United	AX 75	75	4-31x5	35x5	35x5	35x5	35x5
United	AX 76	76	4-31x5	35x5	35x5	35x5	35x5
United	AX 77	77	4-31x5	35x5	35x5	35x5	35x5
United	AX 78	78	4-31x5	35x5	35x5	35x5	35x5
United	AX 79	79	4-31x5	35x5	35x5	35x5	35x5
United	AX 80	80	4-31x5	35x5	35x5	35x5	35x5
United	AX 81	81	4-31x5	35x5	35x5	35x5	35x5
United	AX 82	82	4-31x5	35x5	35x5	35x5	35x5
United	AX 83	83	4-31x5	35x5	35x5	35x5	35x5
United	AX 84	84	4-31x5	35x5	35x5	35x5	35x5
United	AX 85	85	4-31x5	35x5	35x5	35x5	35x5
United	AX 86	86	4-31x5	35x5	35x5	35x5	35x5
United	AX 87	87	4-31x5	35x5	35x5	35x5	35x5
United	AX 88	88	4-31x5	35x5	35x5	35x5	35x5
United	AX 89	89	4-31x5	35x5	35x5	35x5	35x5
United	AX 90	90	4-31x5	35x5	35x5	35x5	35x5
United	AX 91	91	4-31x5	35x5	35x5	35x5	35x5
United	AX 92	92	4-31x5	35x5	35x5	35x5	35x5
United	AX 93	93	4-31x5	35x5	35x5	35x5	35x5
United	AX 94	94	4-31x5	35x5	35x5	35x5	35x5
United	AX 95	95	4-31x5	35x5	35x5	35x5	35x5
United	AX 96	96	4-31x5	35x5	35x5	35x5	35x5
United	AX 97	97	4-31x5	35x5	35x5	35x5	35x5
United	AX 98	98	4-31x5	35x5	35x5	35x5	35x5
United	AX 99	99	4-31x5	35x5	35x5	35x5	35x5
United	AX 100	100	4-31x5	35x5	35x5	35x5	35x5

## MERCHANDISING SPECIFICATIONS

THE tables which appear on these pages have been prepared with the thought of assisting the salesman in the merchandising of passenger cars and commercial vehicles. The data have been limited to those facts which the average salesman finds necessary for comparative purposes and as sales ammunition.

The tables will be corrected and revised down to date every week.

They will be supplemented by others from week to week, intended solely for the garageman and repairman who has the maintenance of passenger cars and commercial vehicles as his work.

Name and Model	Tires	Capacity	Price	Cylinder Bore	Tires	
					F.	R.
Mack	AC 15	15	82500	4-31x5	35x5	40x6d
Mack	AC 16	16	85000	4-31x5	35x7	40x7d
Mack Tractor	AB 5	3100	4-31x5	35x5	35x5	35x5
Mack Tractor	AC 7	4600	4-31x5	35x5	35x5	40x6d
Mack Tractor	AC 11	5250	4-31x5	35x5	35x5	40x6d
Mack Tractor	AC 15	5500	4-31x5	35x7	35x7	40x7d
Mack	39	1	20500	4-31x5	35x5	35x5
Mack	40	2	23500	4-31x5	35x5	35x5
Mack	41	3	26500	4-31x5	35x5	35x5
Mack	42	4	29500	4-31x5	35x5	35x5
Mack	43	5	32500	4-31x5	35x5	35x5
Mack	44	6	35500	4-31x5	35x5	35x5
Mack	45	7	38500	4-31x5	35x5	35x5
Mack	46	8	41500	4-31x5	35x5	35x5
Mack	47	9	44500	4-31x5	35x5	35x5
Mack	48	10	47500	4-31x5	35x5	35x5
Mack	49	11	50500	4-31x5	35x5	35x5
Mack	50	12	53500	4-31x5	35x5	35x5
Mack	51	13	56500	4-31x5	35x5	35x5
Mack	52	14	59500	4-31x5	35x5	35x5
Mack	53	15	62500	4-31x5	35x5	35x5
Mack	54	16	65500	4-31x5	35x5	35x5
Mack	55	17	68500	4-31x5	35x5	35x5
Mack	56	18	71500	4-31x5	35x5	35x5
Mack	57	19	74500	4-31x5	35x5	35x5
Mack	58	20	77500	4-31x5	35x5	35x5
Mack	59	21	80500	4-31x5	35x5	35x5
Mack	60	22	83500	4-31x5	35x5	35x5
Mack	61	23	86500	4-31x5	35x5	35x5
Mack	62	24	89500	4-31x5	35x5	35x5
Mack	63	25	92500	4-31x5	35x5	35x5
Mack	64	26	95500	4-31x5	35x5	35x5
Mack	65	27	98500	4-31x5	35x5	35x5
Mack	66	28	101500	4-31x5	35x5	35x5
Mack	67	29	104500	4-31x5	35x5	35x5
Mack	68	30	107500	4-31x5	35x5	35x5
Mack	69	31	110500	4-31x5	35x5	35x5
Mack	70	32	113500	4-31x5	35x5	35x5
Mack	71	33	116500	4-31x5	35x5	35x5
Mack	72	34	119500	4-31x5	35x5	35x5
Mack	73	35	122500	4-31x5	35x5	35x5
Mack	74	36	125500	4-31x5	35x5	35x5
Mack	75	37	128500	4-31x5	35x5	35x5
Mack	76	38	131500	4-31x5	35x5	35x5
Mack	77	39	134500	4-31x5	35x5	35x5
Mack	78	40	137500	4-31x5	35x5	35x5
Mack	79	41	140500	4-31x5	35x5	35x5
Mack	80	42	143500	4-31x5	35x5	35x5
Mack	81	43	146500	4-31x5	35x5	35x5
Mack	82	44	149500	4-31x5	35x5	35x5
Mack	83	45	152500	4-31x5	35x5	35x5
Mack	84	46	155500	4-31x5	35x5	35x5
Mack	85	47	158500	4-31x5	35x5	35x5
Mack	86	48	161500	4-31x5	35x5	35x5
Mack	87	49	164500	4-31x5	35x5	35x5
Mack	88	50	167500	4-31x5	35x5	35x5
Mack	89	51	170500	4-31x5	35x5	35x5
Mack	90	52	173500	4-31x5	35x5	35x5
Mack	91	53	176500	4-31x5	35x5	35x5
Mack	92	54	179500	4-31x5	35x5	35x5
Mack	93	55	182500	4-31x5	35x5	35x5
Mack	94	56	185500	4-31x5	35x5	35x5
Mack	95	57	188500	4-31x5	35x5	35x5
Mack	96	58	191500	4-31x5	35x5	35x5
Mack	97	59	194500	4-31x5	35x5	35x5
Mack	98	60	197500	4-31x5	35x5	35x5
Mack	99	61	200500	4-31x5	35x5	35x5
Mack	100	62	203500	4-31x5	35x5	35x5
Mack	101	63	206500	4-31x5	35x5	35x5
Mack	102	64	209500	4-31x5	35x5	35x5
Mack	103	65	212500	4-31x5	35x5	35x5
Mack	104	66	215500	4-31x5	35x5	35x5
Mack	105	67	218500	4-31x5	35x5	35x5
Mack	106	68	221500	4-31x5	35x5	35x5
Mack	107	69	224500	4-31x5	35x5	35x5
Mack	108	70	227500	4-31x5	35x5	35x5
Mack	109	71	230500	4-31x5	35x5	35x5
Mack	110	72	233500	4-31x5	35x5	35x5
Mack	111	73	236500	4-31x5	35x5	35x5
Mack	112	74	239500	4-31x5	35x5	35x5
Mack	113	75	242500	4-31x5	35x5	35x5
Mack	114	76	245500	4-31x5	35x5	35x5
Mack	115	77	248500	4-31x5	35x5	35x5
Mack	116	78	251500	4-31x5	35x5	35x5
Mack	117	79	254500	4-31x5	35x5	35x5
Mack	118	80	257500	4-31x5	35x5	35x5
Mack	119	81	260500	4-31x5	35x5	35x5
Mack	120	82	263500	4-31x5	35x5	35x5
Mack	121	83	266500	4-31x5	35x5	35x5
Mack	122	84	269500	4-31x5	35x5	35x5
Mack	123	85	272500	4-31x5	35x5	35x5
Mack	124	86	275500	4-31x5	35x5	35x5
Mack	125	87	278500	4-31x5	35x5	35x5
Mack	126	88	281500	4-31x5	35x5	35x5
Mack	127	89	284500	4-31x5	35x5	35x5
Mack	128	90	287500	4-31x5	35x5	35x5
Mack	129	91	290500	4-31x5	35x5	35x5
Mack	130	92	293500	4-31x5	35x5	35x5
Mack	131	93	296500	4-31x5	35x5	35x5
Mack	132	94	299500	4-31x5	35x5	35x5
Mack	133	95	302500	4-31x5	35x5	35x5
Mack	134	96	305500	4-31x5	35x5	35x5
Mack	135	97	308500	4-31x5	35x5	35x5
Mack	136	98	311500	4-31x5	35x5	35x5
Mack	137	99	314500	4-31x5	35x5	35x5
Mack	138	100	317500	4-31x5	35x5	35x5
Mack	139	101	320500	4-31x5	35x5	35x5
Mack	140	102	323500	4-31x5	35x5	35x5
Mack	141	103	326500	4-31x5	35x5	35x5
Mack	142	104	329500	4-31x5	35x5	35x5
Mack	143	105	332500	4-31x5	35x5	35x5
Mack	144	106	335500	4-31x5	35x5	35x5
Mack	145	107	338500	4-31x5	35x5	35x5
Mack	146	108	341500	4-31x5	35x5	35x5
Mack	147	109	344500	4-31x5	35x5	35x5
Mack	148	110	347500	4-31x5	35x5	35x5
Mack	149	111	350500	4-31x5	35x5	35x5
Mack	150	112	353500	4-31x5	35x5	35x5
Mack	151	113	356500	4-31x5	35x5	35x5
Mack	152	114	359500	4-31x5	35x5	35x5
Mack	153	115	362500	4-31x5	35x5	35x5
Mack	154	116	365500	4-31x5	35x5	35x5
Mack	155	117	368500	4-31x5	35x5	35x5
Mack	156	118	371500	4-31x5	35x5	35x5
Mack	157	119	374500	4-31x5	35x5	35x5
Mack	158	120	377500	4-31x5	35x5	35x5
Mack	159	121	380500	4-31x5	35x5	35x5
Mack	160	122	383500	4-31x5	35x5	35x5
Mack	161	123	386500	4-31x5	35x5	35x5
Mack	162	124	389500	4-31x5	35x5	35x5
Mack	163	125	392500	4-31x5	35x5	35x5
Mack	164	126	395500	4-31x5	35x5	35x5
Mack	165	127	398500	4-31x5	35x5	35x5
Mack	166	128	401500	4-31x5	35x5	35x5
Mack	167	129	404500	4-31x5	35x5	35x5
Mack	168	130	407500	4-31x5	35x5	35x5
Mack	169	131	410500	4-31x5	35x5	35x5
Mack	170	132	413500	4-31x5	35x5	35x5
Mack	171	133	416500	4-31x5	35x5	35x5
Mack	172	134	419500	4-31x5	35x5	35x5
Mack	173	135	422500	4-31x5	35x5	35x5
Mack	174	136	425500	4-31x5	35x5	35x5
Mack	175	137	428500	4-31x5	35x5	35x5
Mack	176	138	431500	4-31x5	35x5	35x5
Mack	177	139	434500	4-31x5	35x5	35x5
Mack	178	140	437500	4-31x5	35x5	35x5
Mack	179	141	440500	4-31x5	35x5	35x5
Mack	180	142	443500	4-31x5	35x5	35x5
Mack	181	143	446500	4-31x5	35x5	35x5
Mack	182	144	449500	4-31x5	35x5	35x5
Mack	183	145	452500	4-31x5	35x5	35x5
Mack	184	146	455500	4-31x5	35x5	35x5
Mack	185	147	458500	4-31x5	35x5	35x5
Mack	186	148	461500	4-31x5	35x5	35x5
Mack	187	149	464500	4-31x5	35x5	35x5
Mack	188	150	467500	4-31x5	35x5	35x5
Mack	189	151	470500	4-31x5	35x5	35x5
Mack	190	152	473500	4-31x5	35x5	35x5
Mack	191	153	476500	4-31x5	35x5	35x5
Mack	192	154	479500	4-31x5	35x5	35x5
Mack	193	155	482500	4-31x5	35x5	35x5
Mack	194	156	485500	4-31x5	35x5	35x5
Mack	195	157	488500	4-31x5	35x5	35x5
Mack	196	158	491500	4-31x5	35x5	35x5
Mack	197	159	494500	4-31x5	35x5	35x5
Mack	198	160	497500	4-31x5	35x5	35x5
Mack	199	161	500500	4-31x5	35x5	35x5
Mack	200	162	503500	4-31x5	35x5	35x5
Mack	201	163	506500	4-31x5	35x5	35x5
Mack	202	164	509500	4-31x5	35x5	35x5
Mack	203	165	512500	4-31x5	35x5	35x5
Mack	204	166	515500	4-31x5	35x5	35x5
Mack	205	167	518500	4-31x5	35x5	35x5
Mack	206	168	521500	4-31x5	35x5	35x5
Mack	207	169	524500	4-31x5	35x5	35x5
Mack	208	170	527500	4-31x5	35x5	35x5
Mack	209	171	530500	4-31x5	35x5	35x5
Mack	210	172	533500	4-31x5	35x5	35x5
Mack	211	173	536500	4-31x5	35x5	35x5
Mack	212	174	539500	4-31x5	35x5	35x5
Mack	213	175	542500	4-31x5	35x5	35x5
Mack	214	176	545500	4-31x5	35x5	35x5
Mack	215	177	548500	4-31x5	35x5	35x5
Mack	216	178	551500	4-31x5	35x5	35x5
Mack	217	179	554500	4-31x5	35x5	35x5
Mack	218	180	557500	4-31x5	35x5	35x5
Mack	219	181	560500	4-31x5	35x5	35x5
Mack	220	182	563500	4-31x5	35x5	35x5
Mack	221	183	566500	4-31x5	35x5	35x5
Mack	222					



Passenger  
Cars

## MOTOR WORLD GUIDE

Passenger  
Cars

Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2- Pass.	5- Pass.	7- Pass.
ALLEN Series 41	4-31x5	Conn	A-Lite	112	32x3	SS	.....	\$1195	.....
AMERICAN B	6-31x5	A-Kent	West	122	32x4	SS	.....	1835	1765 1865
ANDERSON 20	6-31x4	Conn	Wetha	120	33x4	SS	.....	1675	.....
400-F	6-31x5	Boech	Wetha	120	33x4	SS	.....	12450	..... 1750
APPELSON 8-18	6-31x5	Remy	Bijur	130	34x4	SS	.....	12800	..... 12800
Anniversary	6-31x5	Remy	Bijur	130	34x4	SS	.....	12800	..... 12800
AUBURN 6-39-B	6-31x4	Remy	Remy	120	34x4	SS	.....	1595	1595
6-44	6-31x5	Delco	Delco	131	35x4	SS	.....	1785	1785
BELL	4-31x4	A-Kent	Dyneto	114	31x4	QD	.....	1145	.....
BIDDLF H	4-31x5	Eisman	G & D	121	32x4	QD	.....	2700	..... 12750
BRISCOE BA-24	4-31x5	Conn	A-Lite	104	30x3	C	.....	885	885
BUICK H-4-45	6-31x4	Delco	Delco	118	34x4	SS	.....	1595	1595
H-45	6-31x4	Delco	Delco	124	34x4	SS	.....	1895	.....
CADILLAC 37	8-31x5	Delco	Delco	125	35x5	SS	.....	3220	3220 3220
CASE U	6-31x5	Wetha	Wetha	125	35x4	SS	.....	12100	2100 2100
CHALMERS 6-30	6-31x4	Remy	Wetha	112	32x4	SS	.....	1565	1565
CHANDLER	6-31x5	Boech	Wetha	123	34x4	SS	.....	12095	2175 2095
CHEVROLET 490	4-31x4	Remy	A-Lite	102	30x3	C	.....	715	735
FA D	6-31x5	Remy	A-Lite	108	33x4	SS	.....	1045	1045
COLE 870	6-31x4	Remy	A-Lite	120	34x4	SS	.....	1685	.....
COLUMBIA CAD	6-31x4	Delco	Delco	127	33x5	SS	.....	2595	12595 2595
CROW-ELKHART CE-36	4-31x5	Conn	W. Lord	115	32x4	.....	.....	11595	1550
DANIELS B	8-31x5	Wetha	Wetha	127	34x4	QDR	.....	3760	3760 3760
DAVIS H. J.	6-31x4	Delco	Delco	119	34x4	SS	.....	1685	1685
DIXIE FLYER 1535	4-31x5	Conn	Dyneto	112	32x3	SS	.....	1095	1095
DODGE BROTHERS 1535	4-31x5	Conn	N.E.	114	32x3	SS	.....	1085	1085
DORRIS 6-80	6-4	Boech	Wetha	132	35x5	SS	.....	3500	.....
DORT H	4-31x5	Conn	Wetha	105	30x3	QD	.....	985	985
ELCAR D.F.	4-31x5	A-Kent	Dyneto	116	33x4	SS	.....	1175	1175
ELGIN H	6-31x4	A-Kent	Dyneto	116	33x4	SS	.....	1375	1375
EMPIRE 50-51	4-31x5	Wagner	Wagner	118	33x4	SS	.....	1395	.....
72	4-31x5	Conn	A-Lite	115	33x4	SS	.....	1165	1125
73	4-31x5	Conn	A-Lite	120	34x4	SS	.....	1445	1475
ESSEX A	4-31x5	Delco	Delco	108	32x4	.....	.....	1360	.....
FORD T	4-31x5	Delco	Delco	108	32x4	.....	.....	1395	.....
FRANKLIN 9	4-31x4	Own	.....	100	30x3	C	.....	500	525
FRANKLIN 9	4-31x4	A-Kent	Dyneto	115	33x4	SS	.....	2400	2450 12450
GRANT G	6-3	Remy	Wagner	114	32x3	.....	.....	1245	1245
HARBOR 39	4-31x5	A-Kent	Remy	106	30x3	.....	.....	995	.....
HAYNES 44	6-31x5	Remy	L-N	127	35x4	SS	.....	11950	1900 1950
HOLLIER 206	12-21x5	Delco	L-N	127	34x4	SS	.....	2910	..... 2910
188	6-31x4	Remy	Split	116	32x4	SS	.....	1485	.....
HUDSON Super-6	6-31x4	A-Kent	Split	116	34x4	SS	.....	1385	.....
HUPMOBILE R	6-31x5	Delco	Delco	125	34x4	SS	.....	12300	2200
JACKSON 340	4-31x5	A-Kent	Bijur	112	33x4	.....	.....	1500	1500
JONES 27-28	6-31x5	A-Lite	A-Lite	118	34x4	SS	.....	11405	1495 1570
JORDAN 40	6-31x5	Remy	Wetha	126	32x4	SS	.....	2000	2100 2100
KING F	6-31x5	Delco	Bijur	127	33x4	SS	.....	12775	2775
KISSEL 100-4	8-3	A-Kent	Bijur	120	34x4	SS	.....	2370	.....
LEXINGTON 6-0	6-31x5	Remy	Remy	117	34x4	SS	.....	11644	1644 2293
LIBERTY 10-B	6-31x4	Conn	Wetha	116	32x4	QD	.....	1485	.....
LOCOMOBILE E-38	6-31x4	Conn	Wetha	122	34x4	QD	.....	1785	1785
LOZIER 84	4-31x5	Boech	G & D	120	35x4	SS	.....	1895	.....
82	4-31x5	Boech	G & D	132	36x4	SS	.....	3250	.....
MADISON B	6-31x5	Remy	Remy	124	34x4	SS	.....	11485	1485 1485
MAIBOHM B	6-31x4	A-Kent	Wagner	110	32x3	SS	.....	1290	1290 1320
MARMON 34	6-31x5	Boech	Bijur	136	32x4	QD	.....	13950	3900 3950
MAXWELL 25	4-31x4	A-Kent	Simms	109	30x3	C	.....	1895	895
MCPARLAN Series 4	6-41x6	Magneto	Wetha	136	35x5	QD	.....	4300	4300 4300
MERCER D-40	4-31x6	Boech	U.S.L.	132	34x4	QD	.....	14500	4500
MITCHELL C-42	6-31x5	Remy	Remy	120	32x4	SS	.....	1275	1275
MOLINE-KNIGHT G	6-31x5	Remy	Remy	127	34x4	SS	.....	1525	1525
MONROE M-3	4-31x5	Conn	A-Lite	118	34x4	SS	.....	12000	2000
M-4	4-31x5	Conn	A-Lite	122	35x4	SS	.....	12500	2500
MOON 6-30	4-31x4	Conn	A-Lite	96	31x3	QD	.....	635	1335
MURRAY NASH	6-31x5	Delco	Wagner	114	32x3	SS	.....	935	.....
682-683	6-31x5	Delco	Delco	125	33x4	SS	.....	1485	.....
684-685	6-31x5	Delco	Delco	125	33x4	SS	.....	12500	2500
NATIONAL Six	8-31x5	Dirie	Wetha	128	34x4	SS	.....	2800	2800 2800
Twelve	12-21x5	Delco	Delco	127	34x4	SS	.....	1640	.....
OKLAND 34-B	6-31x5	Delco	Delco	121	33x4	SS	.....	1100	1100
8-45	6-31x5	Delco	Delco	128	34x4	QDR	.....	12450	2450
8-45	6-31x5	Delco	Delco	128	34x4	QDR	.....	13150	3050 3050
8-45	6-31x5	Remy	Remy	112	32x4	SS	.....	1185	1185
OLDSMOBILE 45-A	8-21x4	Delco	Delco	120	34x4	SS	.....	1700	.....
37	6-21x4	Remy	Remy	112	32x4	SS	.....	11595	1595
OLYMPIAN 20	4-31x4	Conn	A-Lite	112	32x3	.....	.....	11940	1940
OVERLAND 90	4-31x5	Conn	A-Lite	104	31x4	C	.....	985	985
PACKARD 8-35	12-3	Delco	Bijur	136	35x5	QD	.....	4900	4950
3-25	6-31x5	Remy	G & D	117	32x4	SS	.....	1555	1555
PAIGE 6-39	6-31x5	Remy	Remy	127	35x4	SS	.....	2060	.....
6-55	6-31x5	Remy	Remy	127	35x4	SS	.....	2060	.....
PATERSON 6-46	6-31x4	Delco	Delco	120	32x4	C	.....	11995	1995
PERLESS 56	8-31x5	A-Kent	A-Lite	125	35x4	SS	.....	12550	2550
PERCE-ARROW B-5	6-41x5	Boech	Wetha	142	35x5	QD	.....	6400	6400 6600
PILOT 6-45	6-31x5	Delco	Delco	120	32x4	SS	.....	11495	1495
PREMIER 6-C	6-31x5	Delco	Delco	125	35x4	SS	.....	12585	2585
REO C-6-54	6-31x5	Remy	Remy	126	34x4	SS	.....	1660	1660
D-4-75	6-31x5	Remy	Remy	120	34x4	SS	.....	1395	1395
SAXON S-4	6-31x5	Boech	Bijur	128	32x4	SS	.....	2875	2875
SAYERS SILX-42	4-4	Boech	Bijur	128	32x4	SS	.....	3350	.....
SCRIPPS-BOOTH D&H	6-21x4	Remy	Wagner	112	32x3	SS	.....	11195	1195
Six-39	6-31x4	Delco	Delco	118	32x4	.....	.....	1095	.....
STANDARD G	8-31x5	Wetha	Wetha	127	34x4	.....	.....	12760	2760
STANLEY Steamer	2-4	.....	.....	130	35x4	SS	.....	3100	.....
STEARNS SKL	4-31x5	Remy	Wetha	119	34x4	SS	.....	12175	2175
SKL	8-31x5	Remy	Wetha	125	35x4	SS	.....	12700	2700
STEPHENS Salient Six	6-31x4	Delco	Delco	118	32x4	SS	.....	11775	1675 1650
STUDEBAKER SH-4-40	4-31x5	Remy	Wagner	112	32x3	SS	.....	1125	1125
SH-4-40	6-31x5	Remy	Wagner	119	32x4	SS	.....	1585	1585
EG-6	6-31x5	Remy	Wagner	126	33x4	.....	.....	1985	1985
STUTZ G	4-41x6	Delco	Remy	120	32x4	SS	.....	2760	12560 2860
TEMPLEAR A-445	4-31x5	Remy	Remy	118	32x4	SS	.....	2585	2185
VELIE 38	6-31x4	Remy	Remy	115	32x4	SS	.....	1465	1465
38	6-31x5	Remy	Remy	124	33x4	SS	.....	1975	.....
WESTCOTT S-18A	6-31x5	Delco	Delco	125	35x4	SS	.....	2400	.....
WILLIAMS-KNIGHT 88-4	4-41x4	Conn	A-Lite	121	34x4	SS	.....	1925	1925
88-5	8-31x4	Remy	A-Lite	125	34x4	SS	.....	2760	.....
WILLIAMS 89-6	6-31x5	Conn	A-Lite	120	33x4	SS	.....	11775	1775
WINTON 33	6-31x5	Boech	Bijur	128	35x5	QD	.....	3160	3160 3200
48	6-41x5	Boech	Bijur	138	35x5	QD	.....	3550	3550

Abbreviations: "A-Kent" Atlantic Kent, "A-Lite" Auto-Lite, "Conn" Connecticut, "G & D" Gray & Davis, "Eisman" Eisman, "J-N" Lees-Neville, "M. E." North East, "Wetha" Westinghouse, "W. Lord" Ward Leonard, "SS" Straight shaft, "QD" Quiet Detachable, "C" Clutch, "QDR" Quiet Detachable Rear-wheel, "NOTE" - Six-cylinder means that the rear three are 30x3 and the front are smaller.



# MOTOR WORLD

DEALERS, ...

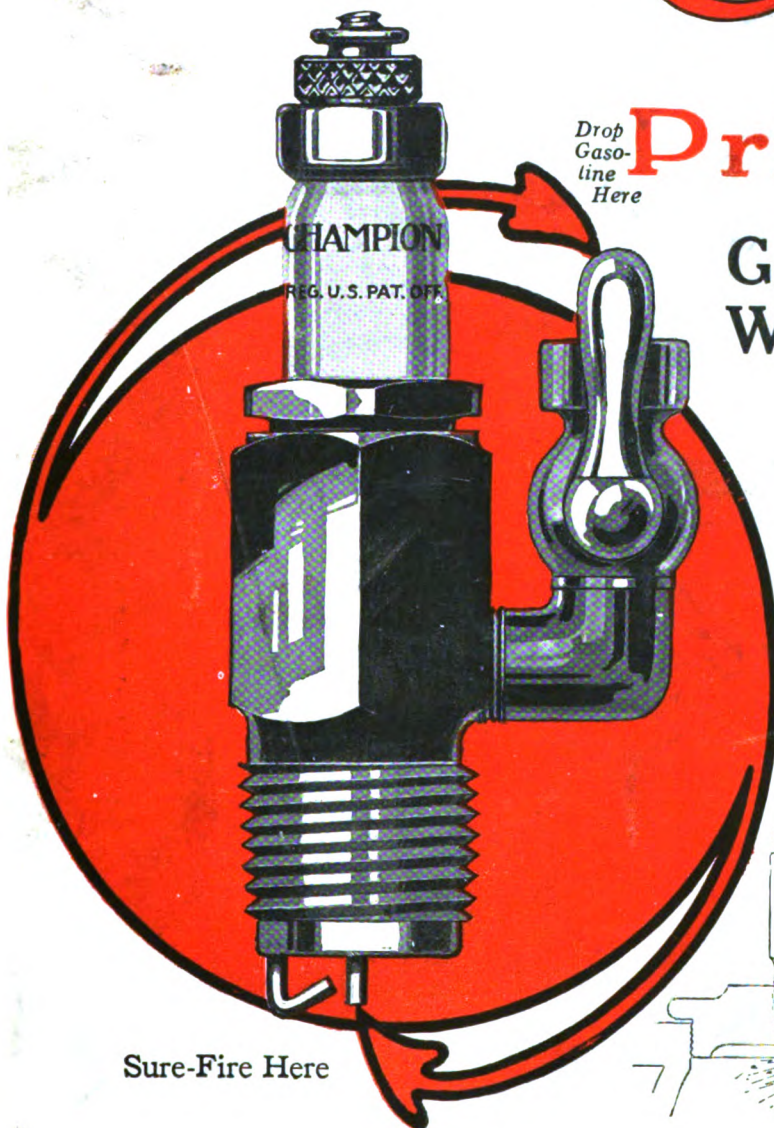
AND GARAGEMEN

Volume LVII  
Number 13ST 39th STREET  
ER 25, 1918Fifteen cents a copy  
Two dollars a year

## Champion

### Dependable Priming Plugs

### Good Business For Bad Weather—Order Now!

Drop  
Gasoline  
Here

Sure-Fire Here

They sure-fire cold motors because the gasoline trickles down the core and drips from the electrode—right where the spark jumps.

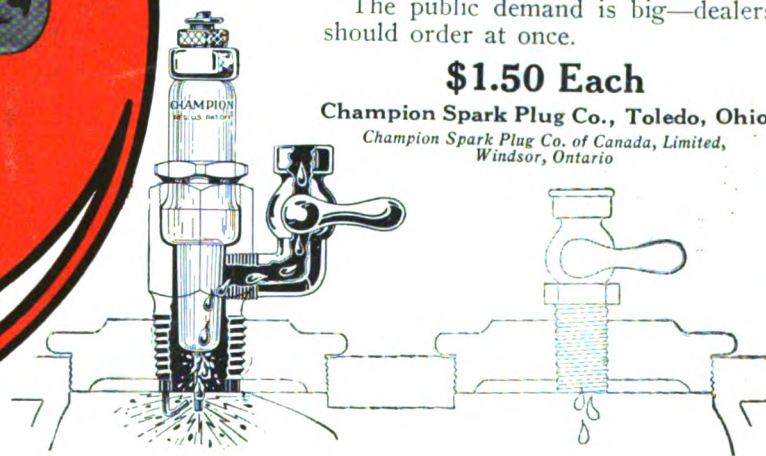
They are imperative in cold weather for the hundreds of thousands of cars that do not have priming cups, and are infinitely better for those that do, because priming cups let the gas in too far from the spark plug.

The public demand is big—dealers should order at once.

**\$1.50 Each**

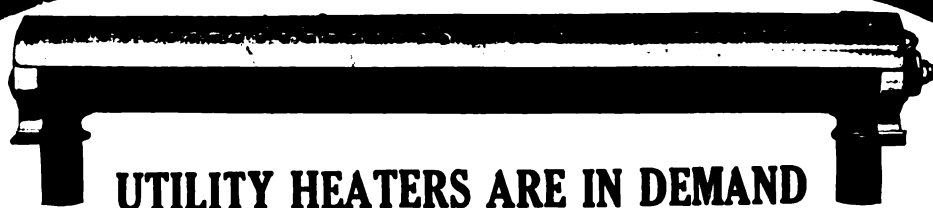
Champion Spark Plug Co., Toledo, Ohio

Champion Spark Plug Co. of Canada, Limited,  
Windsor, Ontario



Sure-Fire

Chance-Fire



## UTILITY HEATERS ARE IN DEMAND



Buyers of new cars as well as users of old ones are demanding UTILITY heaters. They have learned how comfortable they make other cars. They know that any desired degree of heat can be obtained without cost for fuel and without damage to car or wearing apparel.

### NOW IS THE TIME

to cash in on this demand. Don't wait till cold weather. UTILITY heaters will be hard to get then and shipments may be delayed.

Prices from \$9 to \$25  
Made to Fit Every Car

Handled by good dealers everywhere.

*Dealers:* Stock from your jobber. Get your share of heater business this next six months.

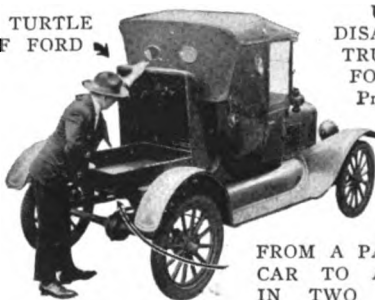
### HILL PUMP VALVE CO.

Archer Ave. and Canal St., Chicago

Sales Department

THE ZINKE CO., 1323 S. Michigan Avenue, Chicago

ORIGINAL TURTLE  
BACK OF FORD

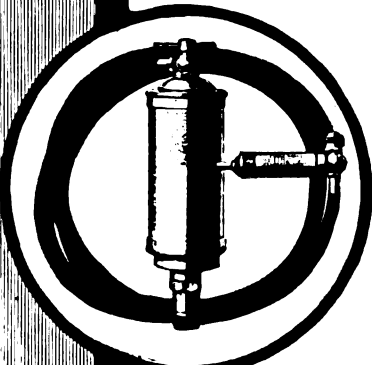


UTILITY  
DISAPPEARING  
TRUCK BODY  
FOR FORDS  
Price \$38.50

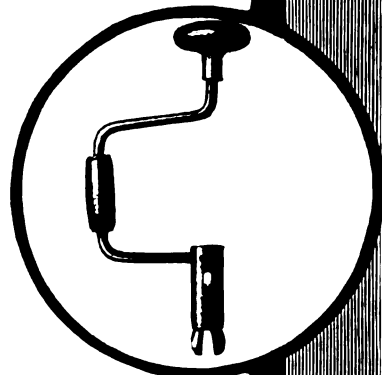
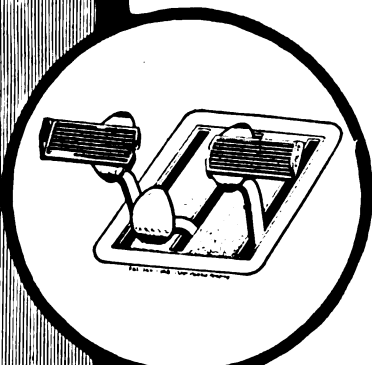
FROM A PASSENGER  
CAR TO A TRUCK  
IN TWO SECONDS

UTILITY  
UNIVERSAL  
Wrench for All Cars  
\$3.50

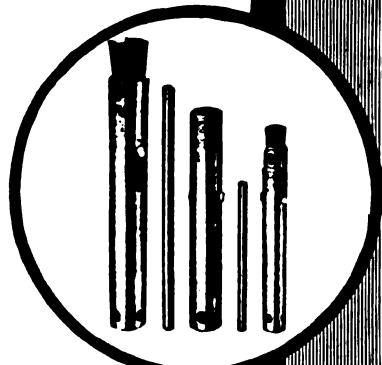
UTILITY PEDALS  
for Fords \$1.25



UTILITY PUMPS  
for All Cars  
\$12.00  
For Fords \$7.50



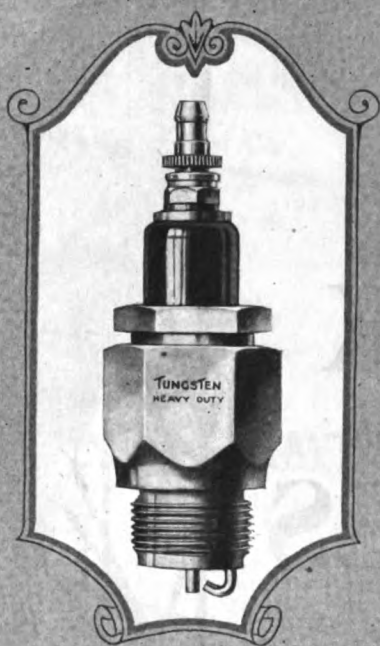
UTILITY RIM  
Wrench for All Cars  
\$1.75



# UTILITY

## Automotive Products





# Performance

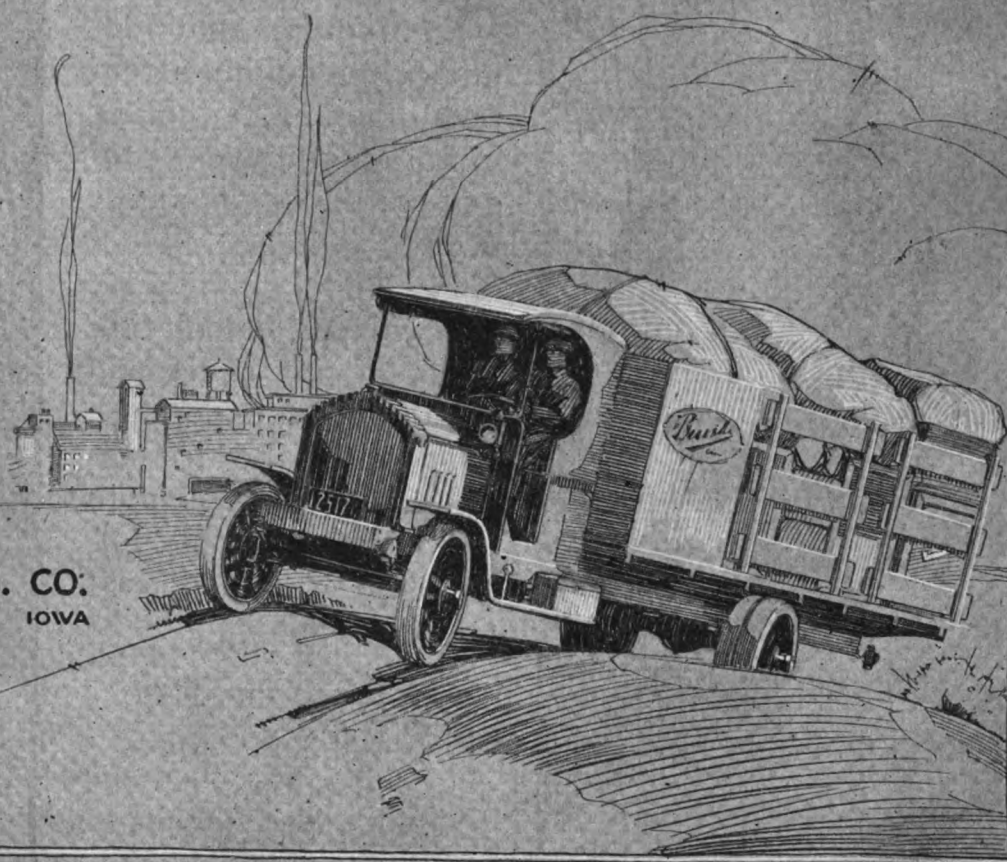
## TUNGSTEN

TRADE MARK REGISTERED

### SPARK PLUG

Always on the job

**TUNGSTEN MFG. CO.**  
MARSHALLTOWN IOWA



When writing advertisers please mention Motor World—it identifies you



# FISK

## NON-SKID

# TIRES

*Better quality  
better looking and  
a better investment  
than ever before*

A MORE salable product, that demands the buying attention of every far-seeing motorist, and every progressive, aggressive dealer.

The careful, calculating buyer of war times will not forget his experience in economy and tire efficiency—to sell that man Fisk Tires is simply following the line of least resistance.

THE FISK RUBBER CO.  
of N. Y.

General Offices  
Chicopee Falls, Mass.

# MOTOR WORLD

DEALERS, JOBBERS AND GARAGEMEN

231-241 W. 39th St., New York City. 'Phone, Bryant 8760  
PUBLISHED EVERY WEDNESDAY BY

## The Class Journal Co.

U. P. C. Building, 231-241 West 39th Street, New York City  
Horace M. Swetland, President  
W. I. Ralph, Vice-President E. M. Corey, Treasurer  
A. B. Swetland, General Manager

**Business Department**  
Charles B. Shanks, Manager

**Editorial Department**  
David Beecroft, Directing Editor  
Ray W. Sherman, Editor  
Stanley P. McMinn, Managing Editor  
J. Howard Pile

**Branch Offices**  
Chicago—Mallers Bldg., 59 East Madison St., 'Phone Randolph 6960  
Detroit—95 Fort Street, West, 'Phone Main 1351  
Cleveland—Guardian Bldg., 'Phone Main 1142

Subscription, Per Annum (Postage Paid).....\$2.00  
Foreign and Canadian Subscriptions.....4.00  
Single Copies (Postage Paid).....15 Cents

### Horseless Age Subscribers

Subscriptions of The Horseless Age transferred to the subscription list of Motor World in the merging of the two publications will be completed in full by the weekly issues of Motor World to the dates of expiration shown on the records of The Horseless Age Co.

Postage stamps will be accepted in payment for subscriptions. Checks, Drafts and Money Orders should be made payable to MOTOR WORLD.

Cable Address, "MOTORWORLD," New York  
Entered as second-class matter November, 1900, at the post office at New York, New York, under the act of March 3, 1879.

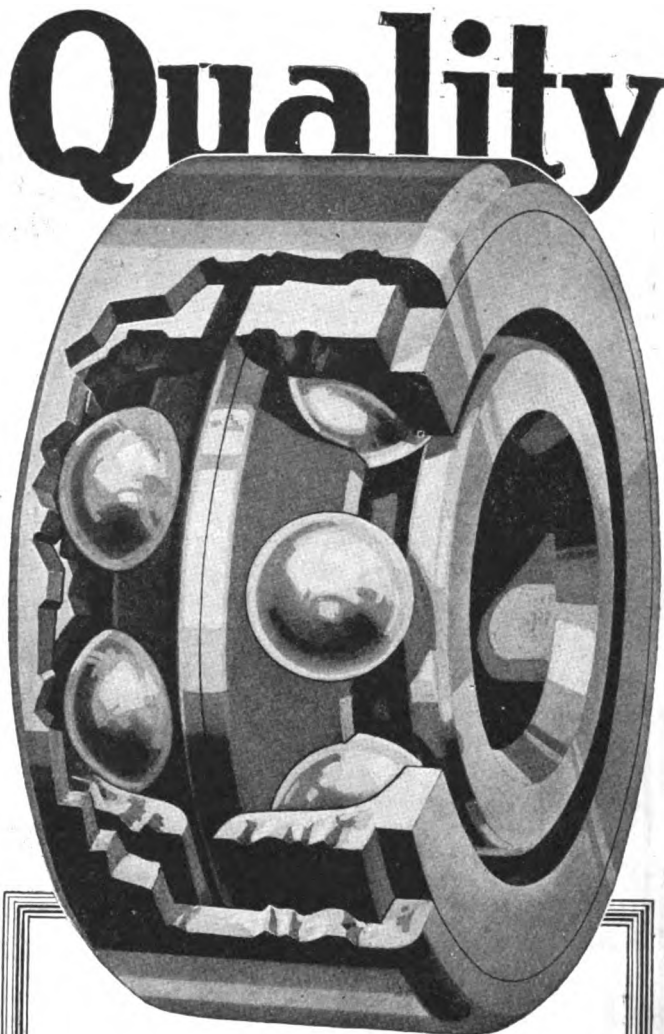
Owned by United Publishers Corporation, 239 West 39th St., New York. H. M. Swetland, President; Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer; A. C. Pearson, Secretary.

Member of the Audit Bureau of Circulations  
Copyright, 1918, by The Class Journal Co.

## Editorial Contents

What Happened at the Jobbers' Meeting .....	8
New Officers of Automotive Equipment Assn. ....	9
Jobbers Favor Wholesale Only .....	10
Chicago Favors Flat Rates .....	13
How to Sell Farm Light Equipment .....	14
Sell Yourself First .....	16
Pinning the Rose .....	17
The Law .....	18
By This Sign Shall They Be Known .....	19
Scientific Garage Construction .....	20
Willys-Knight Service Methods .....	21
Shooting Troubles .....	23
Repairshop Shortcuts .....	24
Editorial Observation .....	26
Letters from Readers .....	27
The Trailer-Potential Business Builder .....	29
The Retail News .....	30
Automotive Equipment .....	32
Winter Business Department .....	34-35
Specification Tables .....	47
Coming Events .....	46
Regular News Department .....	37-45

Advertisers' Index on Pages 110-111



### NEW DEPARTURE DOUBLE ROW TYPE.

A highly successful two-purpose bearing—resisting radial and thrust loads from any direction and in any combination. A single, self-contained unit that does the work of three ball bearings, used in combination mounting.

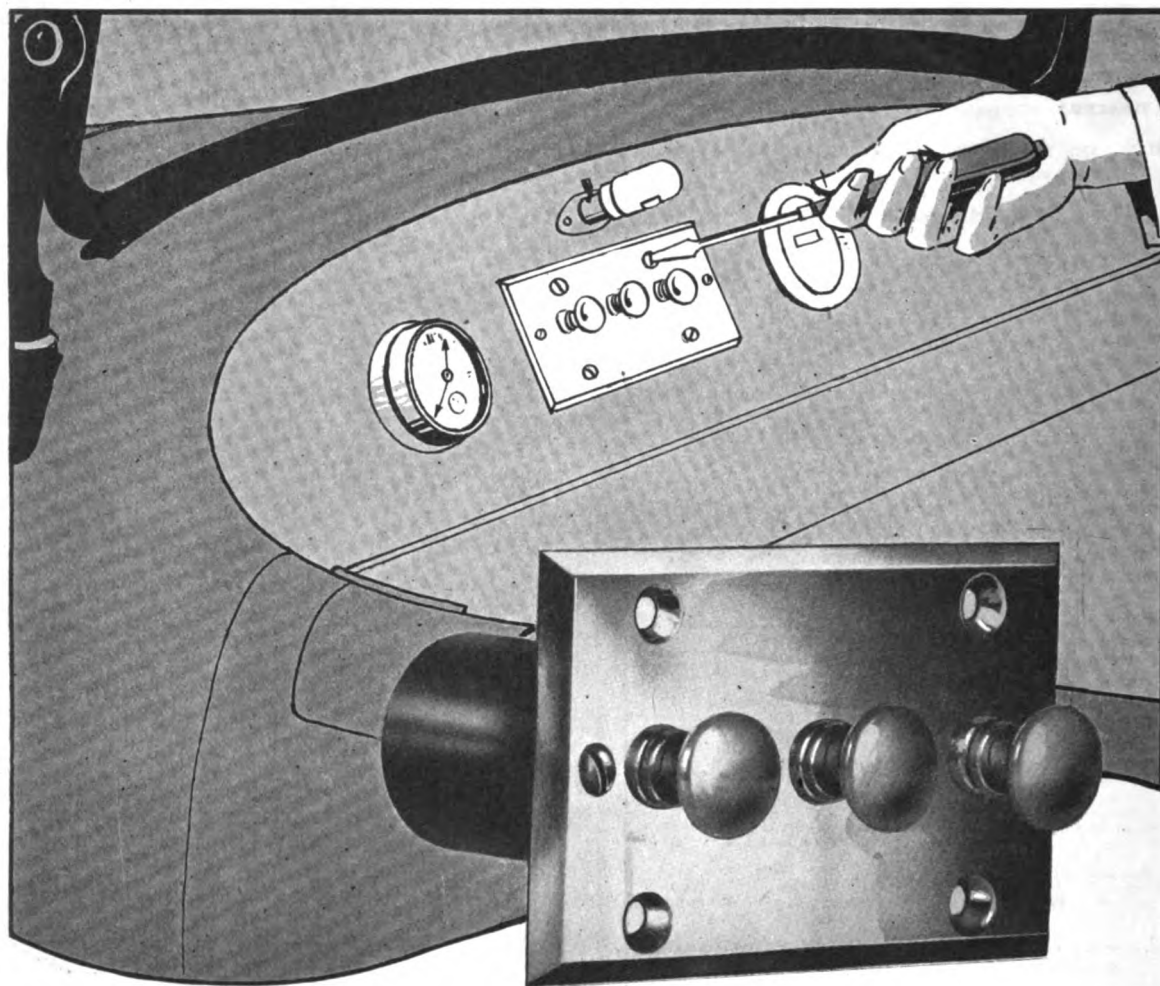
Thus, a considerable saving is made in cost, installation expense, housing space, machining maintenance costs, etc. Non-adjustable and tamper-proof.

Chrome Alloy Steel  
Service-Proven Design  
Precise Workmanship  
A Full Jeweled Bearing

The New Departure Manufacturing Company,  
Bristol, Conn. 390 Detroit, Mich.

New Departure  
Ball Bearings





# CONNECTICUT

**Products are noted for the Simple Practicability  
with which they Perform their Functions**

**T**HE switch illustrated above is a "3-gang" Type N Lighting Switch. This is one of the neatest, simplest and most easily installed switches on the market. The body of the switch is made of materials which will resist the most intense heat, sturdy construction insures indefinite life.

The Connecticut Type N switch is designed so that pulling out a button switches on the light—pushing it in switches it off.

Type N switches are made with from one to four control buttons and all that is necessary to install is to bore a circular hole in the dash, or in case of a multiple gang switch, as many holes with  $\frac{3}{4}$ " centers as there are buttons, including the brass escutcheon plate, as desired.

Put your lighting control problems up to us.

One marked advantage of this switch is that buttons are large enough to be operated easily by a heavily gloved hand.

We have a standard installation which will accomplish any result you require.

Connecticut switches have been famous for years for their neat design and sturdy construction.

It is the exception when one needs repair or replacement during the life of an automobile.

**CONNECTICUT TELEPHONE & ELECTRIC COMPANY**  
MERIDEN CONNECTICUT



## That Other 25%

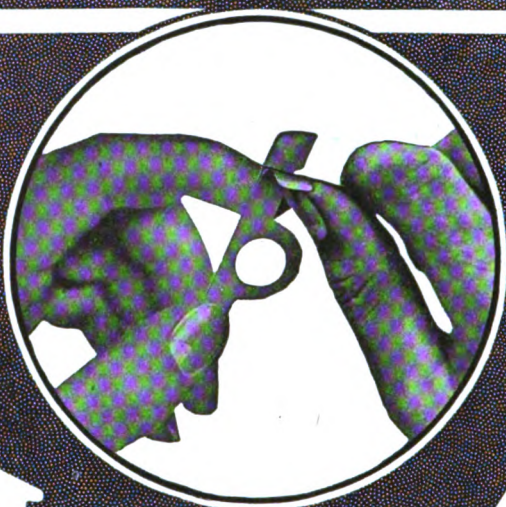
G. Norman Baughman, a large jobber of Tampa, Fla., wrote us recently indicating a plan whereby his company wished to co-operate to the end that **every** dealer in Florida and Southern Georgia become a Motor World subscriber. In conclusion he said:

"Don't think that we are doing this from any philanthropic motive, for we are not. Our motive is an entirely selfish one for we firmly believe that if every dealer in our territory would become a Motor World reader that our business would be benefitted 25 per cent."

We are glad to co-operate with Mr. Baughman and our many other jobber friends in every section of the country to the end of enlisting all the aggressive and progressive dealers as Motor World readers.



# LAMINATED



# SHIMS

## Better Shims—Made Without Effort

LAMINATED SHIMS offer so many distinct advantages that engineers, manufacturers and repairmen have discarded the old-fashioned *solid* shim and the troublesome *loose-leaf* shim. LAMINATED SHIMS are fashioned as easily as lifting paper from a pad. No filing. No assembling. No wasted time and costly labor.

Furthermore, a LAMINATED SHIM is mechanically accurate. There is no chance for human error. The adjustment is always accurate and smooth as glass.

## Save Time, Money, Trouble—Use Laminated Shims

STOCK SHIMS for: Ford, Chevrolet Four-ninety, Continental 7-W, Continental 7-N, Maxwell, Overland, Dodge

**Laminated Shim Company, 533 Canal St., New York**

DETROIT: Dime Bank Bldg.

ST. LOUIS: Mazura Mfg. Co.

ENGLAND: R. A. Rothermel, 6 Great Marlboro St., London, W.

## *For Bearing Adjustments*



# MOTOR WORLD

for  
DEALERS, JOBBERS AND GARAGEMEN

Vol. LVII

New York, U. S. A., Wednesday, December 25, 1918

No. 13

## A Step in the Right Direction



*The jobbers are thinking seriously of cutting out all retail stores.  
They discussed it for a half-day at their meeting in Chicago last week.  
Some day "wholesale only" will be an actuality. The movement has really started.*

# What Happened at the Meeting

## *of the*

# Jobbers Association

- 1—Step taken toward "wholesale only."
- 2—Times Square Automobile Co. applies for membership.
- 3—Name changed to Automotive Equipment Association.
- 4—Elimination of quantity discounts discussed.
- 5—Jobbers get behind defense in Sherman law case.
- 6—All members put on equal basis.
- 7—Next meeting at Hot Springs.
- 8—Phil Lyon new president.

*By Ray W. Sherman*

**C**HICAGO, Dec. 19—While it lasted but two days the meeting here of the jobbers' association was one of the most important ever held.

It came at the beginning of a new era, also just prior to the Sherman law case against the association.

In accordance with the new ideas of the coming period, the jobbers went into a discussion of the elimination of their retail stores.

They also touched upon the subject of eliminating quantity discounts, which means that jobbers would buy at jobbers' prices and dealers at dealers' prices, and large dealers wouldn't by buying at near the same price as the small jobber.

The Times Square Automobile Co. asked for a membership and said it had reformed its business methods, which is quite enough of a trade sensation for one session.

The name was changed from National Association of Automobile Accessory Jobbers to Automotive Equipment Association, for the reason that "accessories" is regarded as a belittling term and the members are both makers and jobbers.

The organization also voted to put all members on an equal basis in every way. Heretofore manufacturing members have been "associates." They have paid smaller dues and have not been paid traveling expenses and the five dollars that the jobbers get for each session at which they are on time. Hereafter, also, a member must stay through all the sessions of

a convention to get any traveling expenses. At some sessions members have answered at the first roll call and have neglected all following sessions. The new rule will make for a more complete attendance.

Not the least interest was in the Serman law case against the association which comes to trial in the United States District Court in New York Jan. 6. The jobbers are raising a fund of \$100,000 for the defense.

All the way through the session was interesting. The things done were of value. In years to come this session may loom up as one of the most important meetings ever held.

Monday the directors and committees met at the Congress. Tuesday and Wednesday the general sessions were held in the Gold Room, except that Tuesday afternoon the manufacturers, with Commissioner Webster, met by themselves in the French Room, while the jobbers,

with President Beech, met in the Gold Room.

The attendance was large.

Ten jobbers and twelve manufacturers were admitted to membership.

There are now about 425 members.

### *HOT SPRINGS NEXT!*

*THE next meeting of the Automobile Equipment Association will be held at Hot Springs, Va., in May or June.*

*Two meetings have been held there and the whole crowd likes the place. There was not even discussion on the subject. The place was mentioned and the vote was demanded and made unanimously.*

*Complete Report of Meeting of the Jobbers' Association on the four following pages*



# New Officers of the Automotive Equipment Association

*President*

*Vice-President*



**Philip H. Lyon**

*of the Chanslor & Lyon Co., San Francisco*



**Richard R. Englehart**

*of the Sieg Co., Davenport, Iowa*

## Jogging the Slow Ones

The association voted to refuse the payment of convention expenses to those who fail to get their bills in to the commissioner within 30 days after the convention. Great delays, he stated, have occurred in some cases.

## Responsibility of Consignee

Somebody wanted to pass a resolution to the effect that the consignee is liable for goods after they are given to the common carrier, and that he should pay for them promptly and make his claims against the carrier and not against the shipper.

Then somebody discovered that the law said that any way, so what use was it for the association to pass resolutions on the subject? Wherefore the subject was dropped.

## THAT ROLL CALL

*Many, many times members have talked out how to save the time that is spent in calling the roll. Thus far no better system has been worked out.*

*The commissioner would like to have somebody work out a better system, and later he may make requests for suggestions.*

*To save his time MOTOR WORLD suggests that members submit to the commissioner plans for doing away with the roll call. It is also suggested that in submitting these plans the plan be BRIEF and DEFINITE. Work the plan out on paper. If you propose to use a ticket, make a sketch of it. Set your ideas down in 1, 2, 3 order, number them and don't waste paper in unnecessarily long letters.*

*The requirements are:*

- 1—Check the member in at the door.*
- 2—Check him out at the close of the session.*
- 3—Check him in and out any number of times during a session.*
- 4—A maximum of efficiency with a minimum of work and confusion.*
- 5—A system that is difficult to beat.*

## Dual Tribute to Beech

AS the convention was about to close Frank Chase, of the Mossberg company, who can be more seriously funny than any other of the convention "steadies," arose and began to "bawl out" retiring president Beech, and just as the "bawling out" was getting good "Dick" Englehart let down from the balcony above the president's chair a silver pitcher.

The pitcher fulfilled a dual mission of appreciation and congratulation. It was appreciation for the service of the president during the past year and in congratulation of his marriage during the same period. The pitcher contained one of the reddest little babies—made of celluloid—that any daddy ever had. "Sid" accepted both with a smile that was redder than the baby.

Turn This Page

## Jobbers Favor "Wholesale Only" Idea

**B**EFORE telling the story of the discussion on the subject of "wholesale only," let us make a statement and prediction. At Hot Springs the matter was "touched on." At the present meeting a half day or more was devoted to it. At future meetings more time will be devoted to it. More and more jobbers will be sold on the idea. One by one the retail stores will disappear. The trade will become nearly wholesale through the movement that has been started, and, finally, the association will be able to become a real jobbing organization, and rules to that effect can be made without upsetting anybody or anything. Big movements are gradual. The trade can't become wholesale over night—but it will get there some day.

That is the statement and prediction. Here is what happened at the meeting: The matter was brought up as an amendment to the constitution, providing that no new member could be admitted unless he were "exclusively wholesale." And then the argument began.

The amendment would not affect those jobbers who are already members, and one manufacturer, at a manufacturers' meeting, said it reminded him a lot of a drunken man trying to reform another drunkard. Similar sentiment was expressed by some of the jobbers, yet at the separate meeting of the jobbers the amendment was endorsed. The action in the separate meeting, however, was only in the way of a recommendation and was not official.

When the matter came up again in the general session it was voted to lay it over until the next meeting. The effect on the jobbing members, however, seems to have been almost as great as though the amendment had been passed, for every member now knows that most of the association favors the "wholesale only" idea, and that some day he will have to be exclusively wholesale or he will be in the minority. Quite a few of the jobbers have already discontinued their retail business, and others announce their intention of closing their retail stores as soon as they can. Of course, with leases and other handicaps the process is sometimes slow. Jobbers also stated that their retail business is not as profitable as one might imagine.

The consensus of opinion was that, while the idea is good, the association is not yet ready for it as far as organized action is concerned.

### Catalog Inserts

**T**HE subject of catalog inserts supplied by manufacturers came up again. It is the opinion of the association that inserts should not be supplied. It was agreed, however, that manufacturers may supply leaves for the portfolios of jobbers' salesmen without detriment.

### New Officers of Automotive Equipment Association

**President, Philip H. Lyon,**  
Chanslor & Lyon Co., San Francisco.

**Vice-president, R. R. Englehart,**  
Sieg Co., Davenport, Iowa.

**Chairman of the Board of Directors, Robert A. Stranahan,**  
Champion Spark Plug Co., Toledo, Ohio.

**Vice-chairman of the Board, J. Ernest Millen,**  
John Millen & Son, Ltd., Montreal.

#### Directors

**Fred Campbell, Fred Campbell**  
Auto Supply Co., St. Louis.

**Howard M. Dine, Dine DeWees**  
Co., Canton, Ohio.

**N. T. Oliver, Metal Specialties**  
Co., Chicago.

**Edward A. Pegau, Western Automobile Supply Co.,**  
Omaha.  
**Louis Schwab, Stevens & Co.,**  
New York.

**J. Ernest Millen, John Millen & Son, Ltd.,**  
Montreal.

#### Three New Directors

**Robert A. Stranahan, Champion Spark Plug Co.,**  
Toledo.

**Joseph M. Bloch, Gibson Co.,**  
Indianapolis.

**George Brunner, Brunner Mfg. Co.,**  
Utica, N. Y.

## STABILIZING PRICES

**T**HE matter of the deferred buying by both jobbers and dealers on account of the price condition was a topic of conversation about the Congress, but no action was taken on the matter.

It is generally recognized that in the equipment trade, as in the motor car trade, the sudden cuts by some manufacturers have caused the trade and the public to go slow about buying, seeming to believe that there will be additional reductions.

This has caused a stagnation that will be serious if the condition is not remedied. What buyers seem to desire more than anything else is an assurance from sellers that prices are not going to be decreased for a definite period, as has been done by several motor car manufacturers.

The assurance that prices will stand for a definite period, until June in the case of the Maxwell and Chalmers, per-

mits the wholesaler and retailer of the product to buy stocks now and dispose of them within the definite period. But if there is no such assurance the distributor cannot know that he will not be caught with a big stock in a falling market with the prospect of serious loss.

The whole situation has brought about a hesitation in the trade. What can be done about it is what is bothering everyone. Dealers have written and telegraphed to Motor World, complaining of the injury being done to them, but with existing laws forbidding the concerted handling of prices by makers and sellers there seems to be no remedy unless each maker feels the sentiment and is required to stabilize his own market for his own protection.

It is believed a big period of prosperity is ahead for five years at least and possibly more, with the big problem being getting from abnormal to normal times.

### Get 2-Cent Stamps

**W**ITH the possibility of a return to 2-cent postage in the near future, members of the association were advised to turn any stamp stocks into 2-cent and 1-cent postage, so that they would not be caught with a big stock of 3-cent stamps when the change is made.

### The "Big Four"

**C**OMMISSIONER WEBSTER reported the gratifying manner in which all divisions of the trade got together recently at Washington to discuss business matters. The organizations represented he termed the "big four." They are the National Automobile Chamber of Commerce, Motor and Accessory Manufacturers' Association, National Automobile Dealers' Association and Automotive Equipment Association, the latter being the new name of the jobbers' organization. The alphabetical string is therefore: N. A. C. C., M. A. M. A., N. A. D. A. and A. E. A.

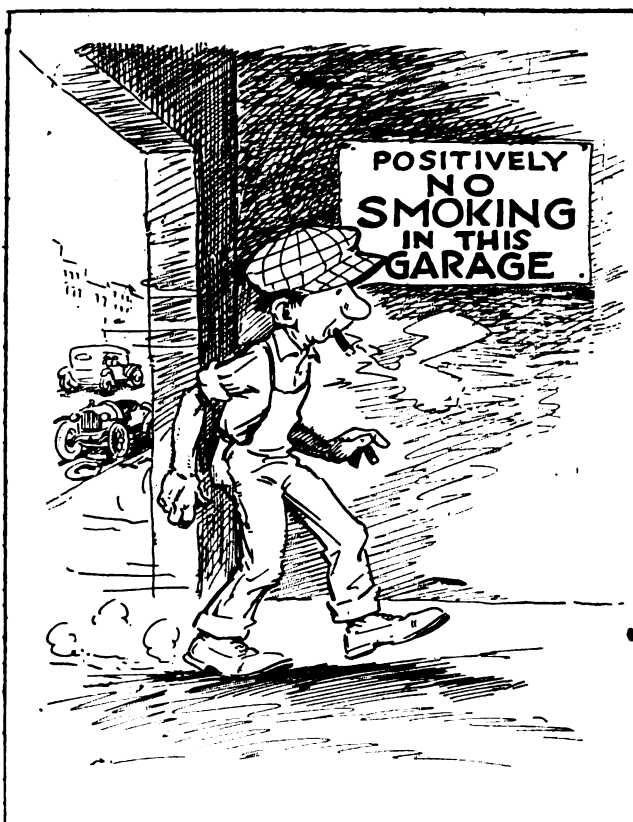
At Washington the jobbers were asked to make a list of essential and non-essential products, and were complimented highly by the Government on the clearness and promptness with which the list was presented. Just as the list was about to be used and just as dealers were signing "essential" pledges the armistice was signed and the work stopped.

### Some Real "Speeches"

**I**T was proposed that at future meetings speakers be definitely assigned to take the lead in handling any important subjects that came up for consideration. As it is now, the question is proposed and the meeting thrown open. The result is that there is considerable rambling and it takes some time for the full opinion of the membership to be brought out. With a leader on each side of each question the preliminary preparation on the subject would bring out a maximum of opinion in a minimum of time.

## If We Believed in Signs—

By Roche



## "TIMES SQUARE" WANTS TO JOIN JOBBERS

*Froehlich Says Company Has Changed Its Policies and Is Going to Be a Real Jobbing House*

ONE of the biggest sensations of years developed, Tuesday morning, when the Times Square Automobile Co. of New York, with 20 branches, applied for membership in the jobbers association.

For years the Times Square has had anything but the good-will of the automotive trade. Like the fat man, "nobody loved it."

The windows of its branches all over the United States have carried the label "Price wreckers," and it has been a topic among dealers that it was hard for the small retailer to do business because customers would "go to the Times Square and get it cheaper." But in addition there has been the allegation that the goods that were sold cheaper were often not first grade goods, and that the man who bought at a "wrecked price" didn't get much more than his money's worth.

Manufacturers who did not want their goods sold in a store with this reputation have, so people say, tried to keep their goods out of the Times Square's hands, but somehow or other the company generally got the goods.

Wherefore, the Times Square was looked upon as a disturber of business,

and when its membership was proposed in the meeting of the jobbers' association there was surprise. No one had ever anticipated that the company had any desire to join a group of business men with a liking for the principles that are favored by the jobbers association.

But when Jesse Froehlich, of the Times Square, appeared in person before the entire association and stated his case, the impression was decidedly favorable and the principal reason the membership was laid over until the next meeting was that the members felt that they wanted more time to consider a matter which was so different from anything they had been wont to believe. It was "too sudden." But after the session many members expressed themselves as very favorably impressed by Froehlich's statement. One thing agreed upon and that was that he "sure had his nerve with him" to come before a body of men whom he knew had not thought well of him for years.

Froehlich said that until last March he had not been the controlling factor in the company, but that at that time he secured control and began to put new policies into effect. He said the "price wrecking" idea had been abandoned and

that the retailing end, which was the seat of the "difficulty," was eventually to be abandoned.

He said he had been in favor of the association and its principles for a long time, but had not been able to work as he desired because he lacked control of the company. He stated that he believed the wholesale end of the establishment would increase greatly once the Times Square ceased to be a competitor of the dealers it was trying to get for customers.

One salesman, he explained, has been started out on wholesale in each branch, and some of the best men in the jobbing trade have been engaged to begin about the first of the year to help the company work out its new plans.

## More Attention to Good Roads

Following a letter from McCullom of Denver on the good roads question, the convention voted that the commissioner should name a committee of three or five to dig into this matter and see what the association can do on the all important question of better highways.

## Finances in Good Condition

NOT considering the defense fund, in the Sherman law case, the association has \$45,000 in cash and bonds.

The credit bureau has been active. It has handled, since the last meeting, 1198 claims, amounting to \$108,000, of which

379, amounting to \$42,000, were collected. This totals 39 per cent.

Of disputed claims the total was \$4,927.58. The adjustments totaled \$93.38, or 18 per cent.

The commissioner urged all members to use the association for the settlement of business disputes of all kinds, or at least to try it.

### Three New Directors Added

Three new directors were added, making 19 instead of 16. Directors have been added in this way from time to time as the organization has grown. It now has about 425 members.

### "The Twenty-One"

In the list following are those who appear for trial in New York, Jan. 6, in the United States District Court, in the Sherman law action against the jobbers' association. An asterisk (\*) means that the company as well as the individual is under indictment. With the exception of Clemence the men have been officers or directors, and were active in forming the association.

- William M. Webster, Chicago; commissioner of the association.
- \*Charles E. Faeth, Kansas City; Motor & Machinists Supply Co. Former president.
- Edward C. Graham, Washington, D. C.; National Electrical Supply Co. Former vice-president.
- \*Sidney B. Dean, St. Paul; Nichols, Dean & Gregg. Former president.
- \*W. W. Low, Chicago; Electric Appliance Co.
- \*William K. Norris, St. Louis; McQuay-Norris Mfg. Co.
- \*William Sparks, Jackson, Mich.; Sparks-Withington Co.
- \*Emil Grossman, New York; Emil Grossman Mfg. Co. Former director. Not now head of company bearing his name.
- \*F. Hallett Lovell, Jr., Newark, N. J.; formerly of the Klaxon Co.
- \*F. B. Caswell, Toledo; Champion Spark Plug Co.
- Harrie R. Williams, Birmingham, Ala. The Gibson Co., Indianapolis, with which Williams was connected then, is indicted. He is now manager of the Electric & Auto Supply Co., Birmingham.
- \*Richard R. Englehart, Davenport, Iowa; Sieg. Co. New vice-president of association.
- \*Grant F. Discher, Milwaukee; Gemco Mfg. Co.
- \*Henry P. Andrae, Milwaukee; Julius Andrae & Sons Co.
- \*George E. Edmunds, Detroit; Edmunds & Jones Corp.
- \*Arthur M. Moody, Boston; Wetmore-Savage Co.
- J. Stanley Clemence, Billings, Mont. Balfour & Wright, with which Clemence was then connected, is indicted. He is now with the Northwestern Auto Supply Co., Billings.
- \*Sidney F. Beech, Chicago; Motor Supply Co. Retiring president.
- \*Thomas M. Brooks, Chicago; Automobile Supply Co. Former president.
- \*Fred Campbell and William L. Ferrier, St. Louis; Fred Campbell Auto Supply Co.

### "Pirate" Part Suit Settled

NEW YORK, Dec. 21—The suit in equity instituted by the Connecticut Telephone & Electric Co., Meriden, against Paul G. Niehoff & Co. alleging infringement of certain Connecticut parts through the sale of spare parts not made by Connecticut but sold for Connecticut equipment, has been settled out of court. Niehoff recognizes the validity of the Connecticut patents and has agreed not to sell "pirate" parts.

## Jobbers Prepare Sherman Law Defense

*Optimistic Over Outcome of Pending Trial in New York—Raising Fund of \$100,000*

Of course, one big topic was the trial of "the twenty-one," as they are generally referred to, in New York in the United States District Court beginning Jan. 6. The charge is that the organization violated the Sherman anti-trust law. The men indicted are the ones who were active in forming the organization three years ago. The membership, however, recognizes the suit as aimed at the organization rather than at individuals and sentiment is unanimous in favor of carrying the defense through in an aggressive manner.

The chief counsel is James H. Wilkerson, an experienced Chicago attorney, who has been connected with many suits in Federal courts. Able assistant counsel is allied with him.

At this week's meeting members voted to contribute to the fund which will be used in preparing the defense and conducting the case. At the French Lick

meeting it was voted to raise approximately \$50,000, of which about \$34,000 was raised and about \$28,000 of it expended. It is now planned to raise, if needed, about \$100,000 more by subscription from the members.

Sentiment among the jobbers is quite in accord with the many resolutions that have been passed by numerous business associations during the past few years, to the effect that the Sherman law, under which the suit is brought, is antiquated and not healthful in its action upon business generally.

The entire trade and many other lines of business are anxious to witness the manner in which the case is conducted and its outcome.

The convention received with enthusiasm an address by Philip H. Grau of Chicago, on the duty of business and the handicaps imposed by antiquated legislation.

At this meeting it recommended that catalog sizes be kept between 6 x 9 in. and 7½ x 10½ in.

Andrae states that several better standards have been made effective. The J. P. Gordon Co., Columbus, Ohio, which puts its goods in cartons, has made the size numbers on the cartons much larger than before, which makes it possible for a stock clerk to read the sizes without climbing a ladder.

The Walden-Worcester Co. is putting up its small wrenches in lots of 10 and its larger wrenches in lots of five, which is one of the standards the committee recommends in the place of the old dozen and gross system. The decimal system makes figuring easier.

The Spencer Metal Products Co., Spencer, Ohio, has adopted a new method of packing radius rods. They used to be tied up in bundles with a wire wound around the ends. This often caused damage to the threaded ends. The company now uses a wood block to protect these ends and also packs them in lots of five.

The committee has also prepared a rubber stamp for jobbers to use when ordering goods from manufacturers. This stamp asks that the maker adopt the decimal system in packing goods. These stamps have not been as generally used as Andrae desires, and he wants all jobbers to get in touch with him and arrange to use the stamp as propaganda toward the decimal system.

### Tractor Schools in Washington

PULLMAN, WASH., Dec. 23—The State College of Washington will give four-week courses on gas engines and tractors beginning Jan. 6. The courses will consist of two weeks on gas engines and two weeks on tractors.

## STANDARDIZATION UNTANGLES TANGLES

THE Standardization Committee, of which H. P. Andrae is chairman, has been working for a year or more in an unostentatious manner and is getting some good results.

### NEW MEMBERS

#### Manufacturers

Auto Leather Mfg. Co.....New York  
Wm. A. Banfield & Son.....Toronto  
Hill Pump Valve Co.....Chicago  
Pennsylvania Piston Ring Co..Cleveland  
Western Mfg. Co.....Oskaloosa, Ia.  
Arrow Grip Mfg. Co..Glens Falls, N. Y.  
Inland Machine Works.....St. Louis  
Anderson Co.....South Bend, Ind.  
Bussman Mfg. Co.....St. Louis  
S. H. Gilmer Co.....Philadelphia  
John W. Brown Mfg. Co.....Columbus  
Copeman Laboratories.....Flint, Mich.

#### Jobbers

Archenbold Automobile Supply Co..  
.....Waco, Tex.  
James Bailey Co.....Portland, Ore.  
Electric & Auto Supply Co.....  
.....Birmingham, Ala.  
Sudger, Gravel & Fils.....Montreal  
Motor Mercantile Co.....Salt Lake City  
Thomas J. Northway...Rochester, N. Y.  
Washington Auto Supply Co.....  
.....Washington, Ill.  
Wholesale Auto Supply Co..Tampa, Fla.  
Chicago Auto Equipment Co....Chicago  
Herlinger Auto Supply Co....Cincinnati

# FLAT RATES, Say Chicago Garagemen

*Monthly Service Doesn't Pay Unless High Rate Is Charged  
—Flat Rates for Service Only Profit Basis*

CHICAGO, Dec. 19.—That flat rates for washing and other similar garage service items provide the only satisfactory and profit-making basis of operation was asserted last evening at the December meeting of the Chicago Garage Owners Association.

That it would be highly profitable for all garage operators to consider this plan was stated by Chairman B. M. Warner of the Standardization Committee. He operates the Green Front Garage at 5043 Broadway—Chicago, not New York—and reported that in October he was operating under a monthly service charge. This included washes and polishes. In November he put into effect a flat-rate system.

The result was that in October he gave 195 washes at a charge of 81 cents each, and in November sold 149 washes at \$1.43 each, with the same payroll. He lost one customer and gained two new ones. He also raised his rates \$3 a month, making them \$15 and gives no more full monthly service.

His October washes brought in \$157.95 and his November washes \$213.07. He did 23 per cent less work and made 35 per cent more money.

November 1 he made his storage \$15 and added the following charges for service: One wash a week, \$1.50; two a week, \$1.25 each; three a week, \$1 each; more than three a week, \$1 each. These prices are for open cars; enclosed cars cost 50 cents more and 50 cents also is added for wire wheels, bringing the wash for a one-a-week wire-wheeled sedan up to \$2.50. Storage is payable in advance. When he raised his rates he says several customers wondered that he hadn't done it before, and one of them congratulated him.

He now has but one full service car—at \$18 a month—and doesn't expect to have that long. He said full service should be cut out unless the charge were \$45 a month.

Otto E. Schmidt, of the Rienzi Garage, 554 Diversey Parkway, also chairman of the Legal Committee, said the garagemen in various sections ought to form local zones. He said the South Side seemed to be in a poor profit-making condition, basing his statement on reports made to him by customers who came from that section and told of the low rates they were able to get.

Under this zone system, which is prov-

## *Helping Dealers Be Better Business Men*

ALWAYS during the conventions the state chairmen are asked to tell what they have done to promote better business among the dealers in their states and to aid in association work.

The best report at this session was made by Charles E. Justus, Columbus, who told of the meeting of the Ohio Automobile Trade Association, which was described in Motor World Dec. 11.

Robert Weinstock, San Francisco, said that state has an organization with 2500 dealers, and has had it for 5 years. Jobbers, he stated, have given considerable assistance to the movement.

S. T. McCullom, Denver, told of the good work the Rocky Mountain Automobile Trade Association is doing.

Pettingill, Tampa, said there are three city associations in Florida, and that a state organization may be developed.

Theo Bass, Peoria, reported a good association in Illinois, with several thriving locals.

In Indiana, stated O. R. McDonald, Indianapolis, there are 850 members in the N. A. D. A. but no strong state association.

W. E. Wissler, Des Moines, said Iowa's association "disrupted" about 18 months ago and that another would be started in response to a growing demand.

M. F. Sterett, Dallas, said Texas has a good organization and that it is doing good work along better highways lines.

Stanley Clemence said Montana had made an absolute failure and "needs a nurse." The locals, he stated, "don't stick."

ing popular in Chicago, a group of garage operators in one residential section form a group association and settle local affairs, determining costs and investigating rates and ascertaining if it is possible for them to make greater profits.

Some garages are said to be washing cars for as low as 40 cents, which, the speakers stated, is less than the cost. It was urged also that garage operators keep books which would tell them their costs so they could know where they are coming out when they fix a rate.

The garage employees are said to be able to do better work on the flat rate basis, because they are not required to do so much.

Schmidt said he has 100 customers and lost none when he raised his rates. He gets \$15 and throws in no washes at all. He said he knew one garage operator whose figures show a charge of but 11 cents for washing.

The great frequency with which garages change hands or change managers is said to be one of the causes for the poor condition in the trade, and the poor condition is said to be due to the fact that not sufficient records are kept to tell where the businesses make and lose money.

As part of the evening's business President H. E. Halbert was re-elected for his fourth year. B. F. Daube was re-chosen treasurer. The association is in good condition, having all debts paid and \$1,654 in bonds and cash. There are 576 members. Associate members are now being accepted and 23 have enrolled to date. An associate is any tradesman not a garageman.

Resolutions of regret were passed upon the death of D. E. Whipple, who was one of the association's strong friends.

The annual meeting will be held about Jan. 6. F. E. Braden talked on the new "Liberty gas," which was recently announced by the Government.

## *Bolsheviki Not Much in Evidence*

There had been rumors that a disgruntled faction with "hardware leanings" might try to start a riot at the convention—but nothing happened; that is, nothing of any consequence.

One afternoon, in a manufacturers' meeting, a "gentleman from Connecticut" relieved himself of a few rather personal remarks, but Commissioner Webster blandly smiled, everybody else laughed, and that ended the revolution.

## *Transport Truck in Production*

MOUNT PLEASANT, MICH., Dec. 23 —The Transport Motor Truck Co. has entered into active production and has completed arrangements for distribution in most of the large trade centers. The company, which is headed by Milton A. Holmes, is to market a 2½-ton internal-gear drive truck equipped with a Continental engine, Eisemann magneto, Stromberg carburetor, Fuller clutch and gearset, Columbia front axle, Jacox steering gear and Prudden wheels. The wheelbase will be 150 in. and equipment is to include a Moto-Meter and a Hub-odometer.



## *A Few Ideas On*

# How to Sell Farm Light and Power

### *How to Lay Out a Campaign, Getting Prospects, Demonstrating, Selling the Light and Power Idea and Finally the Plant Itself*

**T**HE dealer who takes on a farm light and power plant and then sits down and waits for the farmers to rush into his place to sign the contracts will be one of the bystanders watching the march of progress, and he will still be standing still, watching the parade after it has passed. Farm light plants have got to be *sold*.

The field is big. The prospects are numerous. But they won't come to you—you will have to go to them. One of the big reasons that the manufacturers are seeking automobile dealers to handle their lines is that they believe the automobile dealer will get out and sell them, and the dealers have got to get out from behind the counters to sell the goods. Any boy or girl can tend store and fill orders when the customer knows what he wants, but here is an article that must be *sold*.

#### Locating Prospects

Every farmer who is not supplied with central station service and who has money enough to buy is a prospect for the sale of a farm light and power plant. One could completely cover the territory in time, and talk to every farmer, but this would be a long process and there would be a considerable waste of time in seeing and talking to farmers who have not the money to buy plants, or who are lessees of small farms and who are therefore not interested in putting permanent improvements on the farm. A better way is to sift the prospects over and pick off the cream first. As the campaign progresses other leads will be picked up, and these can be followed through at the time.

The dealer's personal acquaintance with the people in his territory will no doubt suggest a number of likely buyers. If he has been handling a car or truck and has sold a number of these, a good prospect list can be made up from the names. Even those who have been approached but not sold on a car, truck or tractor may still be good prospects for a farm light. These prospects are selected first because from the very fact that they bought or evidenced an interest in the automobile or tractor, tends to show that they are modernized and have some money.

Automobile registration lists can usually be secured from the Secretary of State, and these can be combed for the owners of cars and trucks in the dealer's territory.

The local 'phone directory is also a valuable aid in finding prospects.

Make a note of all the farmers' trucks that you see on the road, copying down the names and addresses if they are painted on the trucks. Get your employees to do the same. The probability is that these fellows are live wires.

New names may be added to the list by local advertising of various kinds. Nearly all the manufacturers supply stock electros of a complete ad, the dealer's name and address being added, or the dealer can make up his own ad, the manufacturer furnishing cuts of the plant itself. Such advertisements may be inserted regularly in the local dailies or weeklies, in programs, school publications, etc.

---

### The live dealer will keep the plant before the public with advertising and stunts :

---

Lantern slides may be procured and arrangements made to show these at the movies between the reels of pictures.

Billboards, fences and street car ads can also be used judiciously.

The live dealer will always be on hand in an emergency to pull some stunt in public. *One chap hooked his plant up to a town fire alarm system when the regular source of power broke down.* Of course he did not keep it a secret and the stunt was the direct means of his selling three plants. There are lots of chances to get publicity. Try to *get the privilege of supplying lights for the next circus that comes to town*, and arrange the installation so that everybody can see it.

A good display window is worth a lot. It will keep the local people constantly reminded that you have the plants for sale, and it will catch the eye of motor-

ists from the districts further away from you.

#### Listing the Prospects

An intelligent listing of the prospects will save a great deal of time on the outside and make more productive work possible in a shorter length of time. The following data is suggested as giving some advance information that will enable the dealer to plan his selling talk ahead rather than have to jump at conclusions when he gets on the spot.

1—Name and address.

2—Data concerning house and farm, including whether the farm is owned or rented, size of farm, size of house and number of rooms, number and size of outbuildings, barns, stables, etc.; whether it would be possible or desirable to use electric power for water pumps, silage cutters, churns, cream separators, milkers, clippers, saws, etc.; probability of using electric household utensils such as toaster, coffee percolator, hair curler, etc.

3—Other data relating to the progressiveness of the prospect—whether he owns an automobile, motor truck, tractor, etc.

4—Any available data as to the prospect's credit. Mention may be made of any reports of the size of his crops, real estate holdings or information that would throw light on the prospect's ability to pay for a plant. More precise information on this point can be obtained from a local bank or trust company.

This information is best kept in a card index.

#### Selling the Plant

The farm light plant cannot as a rule be sold by mail or by any other indirect means. The dealer must go out and talk to the prospect and bring one of the plants along with him. His salesroom is the farmer's house or barn.

First sell the idea, then sell the plant. Make the farmer see that he needs electricity for power or light, as the case may be, before talking about the plant you have to sell.

By planning the attack beforehand, the sales talk can drift along without obstruction, which would be likely if the hit-and-miss method is used. Find out first whether the plant could best be sold

on the power basis or on the light basis or a combination of both. Sometimes this information can be secured from the prospect cards or by looking around the place. If the farmer has a lot of dairy machinery this is a chance to talk power. Use every wedge possible. If the windmill is broken down or if there is not wind enough to keep the water supply up to normal, use this to urge an electric water pump.

In any event keep bore and stroke and revolutions per minute out of the sales talk unless these technical details are asked for. The main idea is—

1—Get the farmer sold on the idea of electric light or power.

2—Sell him the plant you are handling as a means of securing the supply of electricity, but only after you have sold him on the electric idea.

### Demonstrations

The most convincing argument is to let one of the plants perform some of the labor around the farm or to light up the parlor. Take one of the plants out on a trailer, or on a car which has a compartment to hold the plant. These should be so arranged that the plant can be put in operation without doing anything more than taking the cover off and pressing the button.

This makes a good impression.

Don't have a great mass of junk to push out of the way before you get started. Don't have to fill up a tank or make a lot of adjustments.

This makes a bad impression.

## Let the plant help sell itself; don't keep it in the background : :

Take along a portable motor, a vacuum cleaner, a few lamps attached to a long cord. Pull up alongside the house and run the cord in the window. Demonstrate what a good light electric light is. If the day is just closing and the house is getting dark this is doubly effective. Maybe the farmer hangs his oil lamp on a hook in the ceiling. If you have a small portable chandelier that you can hook up in its place, so much the better.

Hook the portable motor up to the churn or the cream separator. Provide an assortment of pulleys for this sort of thing, so that you can hook up to anything and run it.

Show the farmer's wife how much easier it is to run a vacuum cleaner around the room than it is to sweep. Also show that there is no dust raised and show that the vacuum cleaner will remove more dirt than a broom will. Ask her to sweep a rug clean, then take the cleaner and get another cup full of dirt out of it. Let her work it herself.

Leave the plant on the back porch for a day or so and let the farmer operate himself. This is a great plan for creat-

ing a desire for ownership on the part of the farmer. If the wife has gotten the idea, leave it to her to help you sell the plant. Always include some accessory in the demonstrating outfit that will appeal to the woman.

### Sales Resistance

The farmer in many cases puts up arguments against buying such as—

*"Windmills are cheaper."*

*"I will wait till the price comes down."*

*"I will think it over."*

*"I can't spare the money now."*

*"I'll wait till they get past the experimental stage."*

*"Father got along without it."*

*"I will let you know next fall."*

These arguments of sales resistance must be studied out and combatted in a way that seems best under the circumstances or in a way that has worked before under the same circumstances. It is a clever plan to list some of the excuses, and if there are a number of people in the organization selling the plants, a comparison of notes and the kind of answers given, will invariably assist all the men on the force. If the dealer is working alone, the study of the problems will almost reduce the answers to a science. It will mean that the farmer can only think up the excuses one at a time offhand, but the dealer will be prepared with a dozen answers for every objection that the farmer can raise.

### Technical Details

Technical details of the plant are best left out of the sales discussion unless specific questions are asked that cannot be evaded. Do not volunteer a lot of data about amperes, mixtures, lubrication, commutators, etc. This only serves to confuse the prospect and make him think that the plant is complicated and that he will not be able to operate it without a licensed engineer. Tell him how many lamps the plant will operate, how much floor space it takes up, how much fuel it burns and how often he will have to run it to keep the batteries charged. Do not try to tell him how to take care of the batteries till after you have sold the plant. Do not deceive the prospect, but do not tell everything you know. The operation of the plants is simplicity itself, but if you read an entire instruction book to a farmer who has not had the opportunity of getting acquainted with electricity, batteries and generators, you produce exactly the opposite effect to the one you want to produce.

### Installation of the Plant

The installation of the plant will usually consist in mounting it on a concrete or strong wooden base in some convenient place. The wiring may either be done by the dealer or an agreement may be made with an electrical house to do the wiring whenever a plant is sold. It is more satisfactory for the dealer to keep his skirts clear of this matter and not assume the responsibility of this outside work. Recommend the electrical

man to the farmer, and let them make their own arrangements. Then the electrical man will have to look out for his own money and guarantee his own work. Try to get some accurate information as to the cost of wiring different kinds of houses in your locality. It will then be possible to give the prospect some kind of an idea how much it will cost him to put the plant in if he buys it.

Get complete data on all accessories that can be used with the farm light plant. Keep this information up-to-date as to prices and models. Suggest the different things that he can use. Here is a good list:

Portable motors 1/12 to 1/2 hp.

Stationary motors.

Electric fans.

Milking machines.

Churns.

Cream separators.

Adapters to operate existing machinery with portable motors.

Electric sewing machines.

Toasters.

Coffee percolators.

Curling-iron heaters.

Water heaters.

Electric grills.

Water pumps.

Electric flat irons.

Electric heaters.

Vacuum cleaners.

Even if the dealer does not propose stocking these articles he should have one of each for demonstration purposes, because it is mostly by a visual demonstration of the work the plant will do that the farmer is induced to buy. He will be skeptical if you show him the plant and tell him all the wonderful work it will do and then do not back up your

## Feature service as a sales point, but do not intimate free service

statements. Do not get in the lightning-rod agent class.

Service is one of the sales points. Tell the prospect that if the plant breaks down, or if he has trouble in learning to operate it, there is help within quick and easy call, and you are that help. Do not give him the impression that this will cost him nothing, but make it plain that his plant will not be out of operation for lack of parts or skilled help to make the necessary repairs. Tell him you are trying to sell him electric service that will be continuous service and that you are not trying to dump a plant on him and then let him worry how to keep it running. Feature the fact that he will not have to send half way across the continent for assistance, as you are close by and have a telephone.

This is a big field for a far-sighted, persistent salesman. Last year was a prosperous one for the farmers. They have the money, and just now they are short of help. Now is the time to slip in the power-to-save-labor argument.

# Sell Yourself—Then Sell the Other Fellow

Unless the Dealer Believes in the Goods He Will Find It Hard to Make the Prospect Believe in Them

**"K**NOW your goods; sell yourself thoroughly on them first; unless you do, you can't sell the other fellow—at least, I can't," says E. J. Ellerman, Ford dealer at Warren, Ind., and, ipso facto, Fordson tractor dealer as well.

"I often think of the first job I went after," said Mr. Ellerman. "I tackled a Ford dealer—no matter which one now—and applied for the position of salesman."

"Do you know anything about the selling of cars?" he asked.

"I explained that I had been running a Ford for a long time; that I thought I could take it apart and show what made it tick; that I could explain it from carbureter to tail light, and that I could sell it all right.

"Nothing doing!" said he. "You know too much. You'll ball up every sale. You'll spend so much time telling the prospect all about the car that you won't have time to get his name on the dotted line. A real salesman don't want to know too much about what he has to sell. His business is to sell, not to tell what he knows. Can't use you."

"So I didn't get that job. Nevertheless I wasn't convinced that ignorance of the goods one was to sell was a qualification for the salesman and I don't believe it now. I am much less inclined to believe it than ever I was since I went into the business of trying to sell tractors.

"Remember that story that appeared in Motor World some time ago about the 'Overconfident Tractor Salesman'? Well, I read that before I got into the tractor business and it made a hit with me all right. I made up my mind that I never would get myself into the same boat.

"So when I made up my mind to sell the Fordson tractor I first sold myself on it. I went to few demonstrations pulled off by other dealers. I didn't say anything, just stood around and took in all I could with my ears and eyes. Watched the tractor work and soaked up everything I could about it and how to use it. Then I started in. The first time I attempted to make a demonstration I myself took the tractor out and tried to do the plowing with it. I demonstrated to myself just what I could do and what I could not do with both tractor and plow, and when I had convinced myself that if I were the possessor of a farm I should put a Fordson on it, I found myself ready to convince the other fellow. I did too. You see, by that time I knew what had to be done to make tractor and plow work properly under conditions as I found them.

"Another thing I learned: that was that it was up to me to know. Some farmers don't know how to plow properly with horses, to say nothing about knowing how to plow with a tractor. In order to sell them I had to know myself so that I could show them. Then I found out that soil conditions were a factor which I had to take into account with every sale I tried to make. There are in this immediate locality three kinds of soil: a sandy loam, easy to plow and to work; a clay soil, which is much harder; a gumbo, that is like chewing gum at times. Some seasons the plowing conditions around here are very difficult. This happens to be one of them, in fact.

"Now, knowing these conditions, when a farmer wants me to demonstrate the plowing ability of the Fordson on his farm I make no promises and don't invite in the neighbors. I make it a condition that in case I do succeed in plowing to his satisfaction that he has bought a tractor, then I go out myself and demonstrate.

"After I have convinced the farmer that I can plow his land, no matter what it may be, then it's time to invite in the neighbors to see. No 'over-confident salesman' for me! I know the capabili-

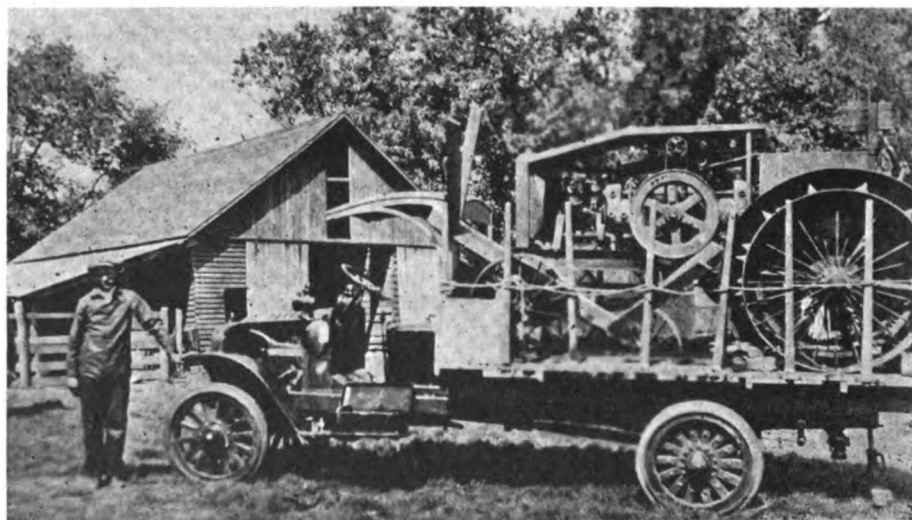
ties and the limitations of my tractor, and if the conditions are such that I believe I can't meet them successfully I don't try. One failure will kill all the prospects within earshot, and I don't intend to register any failures.

"When I make a sale I make a real sale. I carefully explain to the farmer that he is buying something which will do the same work he has been doing with his horses, but which will do it quicker, better and cheaper. Yet in order to make it do these things he must use common sense and not try to make it do stunts it never was intended to attempt. I explain hitches, adjustments and everything which in my opinion will enable the farmer to use the tractor to the best possible advantage. If necessary, I spend a whole day doing this. Then I turn him loose.

"If he sends for me later he has to pay me 10 cents a mile for the distance traveled and 75 cents an hour for all the time I am on the job.

"That's the way I sell tractors.

"I have a small territory, close to the state distributing agency at Indianapolis. At the same time I carry an ample stock of spares, but do not have to concern myself very much about service equipment. The best equipment I have is my own; it consists of my own personal knowledge of the conditions the individual farmer will meet on his farm and such a thorough knowledge of my tractor and what it will do that I can tell in advance just what he will have to do to adapt it to those conditions. If there are conditions I can't meet, then I won't sell, that's all. But, so far, I haven't started anything I didn't finish."



## Tractor Buyers Are Truck Prospects

*All tractors sold by C. U. Williams are delivered by truck. Williams believes that trucks are fully as essential to farmers as tractors and, when a tractor is delivered, a salesman accompanies it and, incidentally, puts in a word in favor of a truck. The ease with which the tractor is loaded or unloaded is illustrated on the ground and, even, if a sale is not made immediately, the farmer is set to thinking and, when spring time rolls around, the salesman hastens to the farm to see if the seed he has planted has developed any kind of a sprout. Not many farmers will buy a tractor and a truck at the same time, but once converted to the tractor, it is easier to sell a truck. The names of all tractor buyers are filed as truck prospects and many invest after being won over to power planting. If a farmer is progressive enough to invest in a tractor, it is a safe assumption that sooner or later, he will order a truck*

# PINNING THE ROSE

## *Is the Jobber's Salesman to Blame?*

By RAY W. SHERMAN

SOMETIMES when Reilly had to pay a bill to the Callawassa Automotive Equipment Co. he carried the check around himself because he liked to build the fences of the Callawassa Motor Trade Association, and Ed Holsey, manager of the "Automote," was a good association worker if his enthusiasm didn't run down.

"Well, Reilly," said Ed, after flipping the check and statement into the outgoing basket without looking at them, "we close the retail store the first of the year."

"Really going to close it?"

"Yep! Tight! That means more business for you and the other equipment dealers around town."

"I hope so," was Reilly's comment, as he picked up a new contraption that a salesman had left that morning on Holsey's desk and fingered it curiously.

"That is, the business is there for you if you'll take it. If you don't take it I suppose the hardware men and the department stores and the druggists will get it. But, at that, the retail store wasn't much of a profit maker comparatively and I'm glad it's gone. Wholesale only is a lot better business."

"How do the dealers take to the idea?" Reilly asked.

"Oh—I don't know. Some of them seem glad, but most of them don't seem to give a hoot. I'll tell you, Reilly"—and Holsey became heated—"these dealers and ought-to-be-dealers don't take as much interest in this as they ought to. You'd think they'd be tickled to death to see a jobbing house go out of the retail business. You'd think they would proceed to horn in and build up paying accessory departments, but there are garagemen in this town—and in all the towns in this territory—who don't seem to realize what the accessory business means to them."

"I suppose so."

"I know so!" Holsey exclaimed. "I've sat here in this chair for seven years and watched this business grow and shift and move. I've seen garagemen come and go because they were poor business men. They didn't make money out of the departments they had and they refused to add an accessory department—or any other department. As for getting them to clean up and be better business men—fooeys! It can't be done!"

"Why can't it be done?" Reilly calmly inquired.

"Why?" Holsey repeated. "Why? Because the only point of contact we have with these dealers and garagemen is our salesmen, and these salesmen of ours can't—or won't—do a darned thing to make better business men out of their customers. Why, Reilly, if our salesmen would only spend part of their time teaching their customers to be better dealers and business men it would increase our business to the point where our own salesmen would make a lot more money."

"Why won't our own salesmen do it?"

"Because they're a breed of birds that has grown up in the order-taking business and that's all they know——"

"Did you ever try to teach them?"

"Teach them what?" Holsey demanded.

"Teach them to be teachers of better business?" Reilly replied.

"I've bawled them out about a million——"

"Maybe you have bawled them out, as you say, but have you ever put into effect a plan for making your salesmen teachers of better business? Have you ever taken your men in hand and systematically taught them to do the things you want them to do?"

"Well——"

"Did you ever stop to consider, Ed, that you, as manager, are responsible for whatever your men do? Did it ever occur to you that if your organization is inefficient it is YOU who is to blame? Did that ever occur to you?"

"I can't say that it did—and I can't say that I agree with you. If these ginks who peddle goods for us won't——"

"Now—now—now," said Reilly, stopping the flow of language with a gesture of his hand. "Just wait a minute! Wait a minute! I didn't say you had a bunch of top-notchers. I don't suppose your men are all fire-eaters. You can't expect them to be. Every manager has to take what he can find and build an organization out of it. The merit of an organization depends on the manager's ability as a manager. That's why I say the reason for the condition you describe is pretty much up to you. You're the one at fault, and not the men—and not the dealers."

"The dealers don't know any better. Many of them have been mechanics. They can go back in their families for generations and not find a single strain of business blood. It isn't bred in them."

How can you expect all of them to have business instincts?"

"But most of them can be taught to be better business men. They can be taught to sell accessories. They can be taught to make more money for themselves—and for you—and for me. The only requisite is a teacher—and it's up to you and me to provide teachers. I want to tell you, Ed, old top, that all this wail about the inefficiency and incompetence of jobbers' salesmen might better be directed at the jobbers' managers instead. It's a case of the man in a glass house heaving rocks."

"No sales organization can work along any given line unless there is a real, live, on-the-job manager to lay out the line and show the men how to work. If you want your salesmen to teach better business to dealers and garagemen you've got to show the salesmen how."

"Yes—but HOW?"

"Set down the various steps the salesman must take. He must first get under the skin of the man he wants to teach. He must get his confidence. If he can't do that he ought to be replaced by another salesman. Then he must broach the subject of showing how the dealer or garageman can make more money. Then he must know how to begin."

"He must be willing to wield a broom and mop. He must clean up the whole place. He must make the place safe for accessories. He must be able to plan inexpensive interior alterations, such as putting in runway cabinets, accessory show cases, display windows, and making the establishment look like a store and not like a barn."

"He must then keep after the man and see that the system is kept in operation. Your salesman must be able to trim windows, and do all the things that he wants the customer to do."

"But how——"

"To teach the salesmen these things you'll have to hold sales meetings frequently and let the men tell their experiences. You'll have to demonstrate in person how the job is done, setting up a sample show case if necessary, and having plans and estimates on a runway cabinet."

"YOU'VE got to be a teacher, Ed, before you can expect your men to become teachers. You've got to——"

"S nough, Reilly," Holsey interrupted. "You sure have pinned the rose where it seems to belong. And I'm beginning to like the smell of it better than I did when you first pinned it there."

# THE LAW

By George F. Kaiser

## Perplexed?

*Does some point of law perplex you? Why don't you ask Motor World's legal editor to discuss the question?*

## Court Protects Conditional Vendors of Automobiles

A court decision of great interest to the business world in general and the automobile business in particular was handed down in the City Court, Dec. 6, by Chief Justice Edward J. O'Dwyer.

The case in question was a replevin action by the Packard Motor Car Co. of Boston, involving the seizure of a motor car which had been sold in Massachusetts under a conditional sales agreement. The Boston company sold a Packard Twin Six limousine to the Brookline Taxi Co., which defaulted in its payments and then sold the car to Louis Wolf of New York, the transfer taking place across the Rhode Island line where the Massachusetts law had no jurisdiction. Mr. Wolf brought the car to the Lincoln Square Garage in New York City, and his brother Isaac Wolf resold the car to T. P. Ryan, president of the Longacre Renting Company, who leased the car to the Longacre Renting Co., from whom it was replevined.

Although Mr. Ryan claimed to be a bona fide purchaser for value the Court held that no holder of property could convey any better title to property than he held himself, and that the Brookline company having no title could not legally transfer the car.

The point of interest is that the law of Massachusetts regarding conditional sales is recognized here, and that the conditional vendor is protected against all people—even bona fide purchasers. While New York state requires that all conditional sales be registered, many states, including Massachusetts, do not, and Chief Justice O'Dwyer's decision will be welcomed by the entire automobile world. It will serve as a damper on the indiscriminate purchase of automobiles and other property.

## Garageman Responsible for Car in His Possession

A garageman was practically held to be responsible for a car owner's loss because of damages sustained by his car through fire while in the garageman's possession in a recent New York case.

The car owner left his car with the garageman to have it repaired. The machine took fire and the owner sued for damages.

The car owner claimed that the fire was caused by an employee of the garageman striking a match while near the car. The garageman testified that he repaired the magneto—that the carbureter was leaky, but that he had no instruction to do anything with it. He claimed that a spark from the self-starter must have reached the carbureter and caused the fire. He admitted that when his workman put his foot on the self-starter he immediately saw a flame. Both he and another employee testified that they saw no match.

The court decided that as the workman who was supposed to have struck the match was not produced, and his absence was not accounted for, the claim of the owner should be allowed.

Out of three judges who heard the case, only one dissented from this view, holding that as the garageman and his employee both testified that no match was struck, there was no proof of negligence on the garageman's part, as the question of whether or not a match was struck was the sole issue.

The dissenting opinion will naturally appeal to garagemen as being more sensible than the majority opinion. (Colletti vs. Grachow, 172 N. Y. S. (New York), page, 409.)

## Law for Examining Mechanics

Editor Motor World: Has any State Legislature or anybody else ever passed a law or made a regulation requiring garagemen or automobile dealers in some way to examine the mechanics that are employed in his shop? In other words, is there any legal restriction anywhere on the qualifications a man must have to engage in business as a repairer of automobiles?

Between you and me, I think there ought to be some system for determining what is a good mechanic, but just how it would be worked out I don't know. We might have laws, but one hesitates to begin this passing of laws because there is no telling where the thing will stop, and probably we would have forty-eight laws all different by the time we got through.—R. S., New York.

**Answer**—I have no record of any such law ever having been passed in any of the states, but the proposition has a familiar ring to it.

It is quite likely that all the states

would fail to agree on the same laws; they usually fail to do so.

It would be interesting if Motor World subscribers would give their views on the proposition. How about it? Would it be a good thing for the trade, or would it be a bad thing? The N. A. D. A. please take notice.

## Personal Property Law

That the provision of the New York Personal Property Law which gives the buyer under a conditional sale contract the right to recover the amount he has paid when the property he has bought is retaken by the seller, and sold without notice of sale or the opportunity to the buyer to comply with his contract before the sale, cannot be taken advantage of when the buyer gives new promissory notes for old notes to the seller's successors, is the decision in a late New York case.

It appeared that a copartnership had sold a gasoline engine under a conditional bill of sale. Promissory notes were not paid. Some time later a corporation was formed to take over the business of the copartnership. The buyer gave new notes to the corporation from time to time, and made payments on account. The court held that when the corporation afterward sold the property without giving notice to the buyer he could not recover the amount he had paid as provided in the New York Personal Property Law, as he has put off the time of the seizure of his property by giving new notes, and so had lost his right under the statute. (Ure vs. Deyo, 172 N. Y. S. (New York), page 403.)

## Owner of Car Not Liable

A motor car owner is not answerable for personal injuries inflicted by a motor car owned by him, when it is driven by a person to whom he has rented it, was the decision in a late Massachusetts case, where suit was instituted against the motor car owner by a party who had been injured. The court disallowed the claim of the injured party and decided that the owner was not liable.—Phillips vs. Gookie, 120 N. E. (Massachusetts), page 691.

## Do You Believe In Signs?

See page 11



# By This Sign Shall They Be Known

**T**HE Motor Truck Owners' Association of Philadelphia has adopted a uniform bill of lading which is expected to be a model to motor trucking concerns throughout the country. It protects both shipper and carrier in unusual ways and was drawn up partly with the aid of the Motor Transportation Division of the Bureau of Markets, United States Department of Agriculture.

Association trucks will bear an emblem, on sight of which police and state officers will permit them, by special arrangement, to proceed, even though the driver makes minor violation of traffic rules. The association guarantees to produce the driver when wanted.

**T**HE adoption of a uniform bill of lading which is expected to be a model for the country, the acceptance of an attractive emblem for protective use on motor trucks of members and as a design for their stationery, and the report from the road committee that progress had been made in obtaining material aid for construction of state highways, were the high points in the monthly meeting of the Motor Truck Owners' Association of Philadelphia, held recently in the Pennsylvania Building, Fifteenth and Chestnut Streets.

The suggestion that a central office for recording the names of employees of association members and giving their records for the information of other employers who might receive applications from them met with general favor. It is expected that such an office, or bureau, will be established in the near future.

## Uniform Bill of Lading

The bill of lading was formally presented as having been prepared for the association by its counsel and executive secretary, Harold S. Shertz, in co-operation with the Motor Transportation Division, Bureau of Markets, of the United States Department of Agriculture. It was explained that the purpose of the bill of lading was to work uniformity among motor truck operators and to provide an equitable contract between shipper and operator.

The contract provides for full coverage of the contents of trucks and full protection to the shipper. The face of the bill gives notice to the shipper that *the basic rate of carriage is constructed upon a maximum liability of 50 cents per pound, and that any coverage in excess thereof on the basis of declared valuation will be carried, upon the payment of a rate of charge assessed on the basis of the basic rate plus the actual*

*premium charges for full coverage above the maximum assumed by the carrier.*

It has been the custom of many shippers, it was explained, to carry their own insurance coverage of goods in transit, and it would, therefore, be unfair to charge them a rate base on an assumption of risk on the part of the carrier to the full extent of the value of the goods.

The carrier is protected in that the risk assumed is a fixed quantity, and the premium covering the maximum liability at the basic rate becomes a matter of overhead expense. The excess coverage is given to the shipper at lower rates than he could obtain for full coverage.

## Shipper Protected

The shipper is protected in that he obtains, in addition to the responsibility of the company, the responsibility of an insurance company. The element of gamble in the operation of motor trucks carrying merchandise is eliminated by removing the possibility of the carrier being wiped out through the loss of a single truck, which, under present conditions, might easily amount to \$20,000 or \$30,000.

The form of the bill of lading as adopted has been given careful consideration from every ascertainable point of view by the association and the Department of Agriculture. In the practical use of this form, however, there may arise conditions, it was explained, that do not appear to be fully covered by the conditions of the contract of carriage, and the association, it was said on behalf of the membership, would welcome any suggestion, while the bill of lading will be constantly under scrutiny with a view of revision in such particulars as will keep it fully expressive of the intentions of the shipper and the carrier to a just and equitable contract.

The form adopted contemplates the use of a shipping order and original bill of lading. A memorandum bill of lading has not been included, since usually the

shipment will arrive at its destination as soon as a memorandum bill of lading would reach the consignee by mail. *The adopted form, however, may be used in connection with memorandum bill of lading, delivery receipt, office or billing memoranda, or any other copies which will best conform to the system employed by any carrier.*

A form for use in the shipment of a full truck load from one consignor for distribution to a number of consignees also has been prepared, it was announced, providing for a greater number of items of shipment and the designation of the consignee and the destination of each article shipped.

The emblem adopted for association use will assure protection to members through arrangements made with state and city officials to accept a guarantee of the association for the production of the driver of any truck belonging to a member of the association, committing a minor violation, so that trucks will not be delayed in transit. This means, in other words, that should a driver be stopped, or arrested, for traffic violation, the police, or whoever stops him, will, on finding the emblem on the truck, permit him to go on his way, assured that he will appear in court when wanted.

## Description of Emblem

This emblem consists of the facsimile of a motor truck wheel, in crimson, equipped with tires and bisected by a blue arrow, the name "Motor Truck Owners' Association of Philadelphia" appearing around the rim of the wheel. It will be large enough easily to be distinguished by the police on traffic duty, and will appear on every truck owned by a member of the association.

Vice-President Hayden of the association presided at the meeting and there was a good attendance. Numerous applications for membership were made, among them the John Wanamaker Store's motorized equipment.

# SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

We shall be glad to draw a plan for you or give you any other aid in your building, free of charge. But be sure to send full details, including a sketch of the plot, showing position of streets

## One-Story Salesroom and Garage

Editor Motor World: Enclosed find brief sketch of plans for a garage and salesroom, same to be located in the heart of town, and salesroom to face main street, with L-shaped lot to have entrance on cross (Oak Street).

While we are having plans drawn by an architect here, we thought possibly we could get some good ideas from a plan drawn by your architect.

We deal in Cadillac and Overland cars and also handle a considerable quantity of used cars.

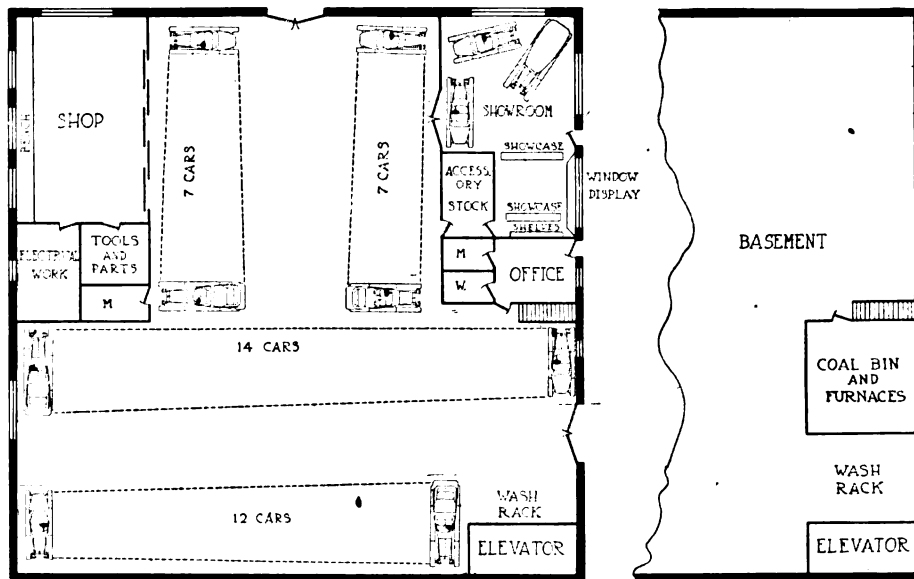
We are desirous of having an up-to-date display room and offices.

This is to be a one-story building with basement under the 50 x 50 ft. area on Oak Street.

Will use brick walls already constructed as shown by X on sketch.—H. C. Bradley, Fort Collins, Colo.

Answer—Enclosed is a plan which is drawn according to your request. We might be able to draw a better plan if you were to give us more information as to just what you want.

We think you are making a grave mistake in locating the shop in the basement. Good light, pure air and a dry floor are essential to good work, and as near as we can tell from your plan these are not available, since the basement will be entirely under ground.



Provision has been made here for display of cars and also accessories

## Plan for a Corner Lot

Editor Motor World: We are planning a modern garage, 100 x 100 ft., on a corner lot. We want a workshop, showroom, stockroom, electrical room, office, toilet and storage on main floor; washroom and old cars in basement. Will you please send us some plans? Our town has about 4000 inhabitants.—Dermott & Harlan, Huntingburg, Inc.

Answer—Herewith is a plan which is drawn according to your request, containing a showroom, stockroom, electrical room, office, toilet and storage rooms on main floor, as well as a washroom and old cars in the basement.

In addition we have made provision for an accessory store. Perhaps you had it in mind to specify this also, but you did not say so. In case you did not, let us recommend the advisability of having

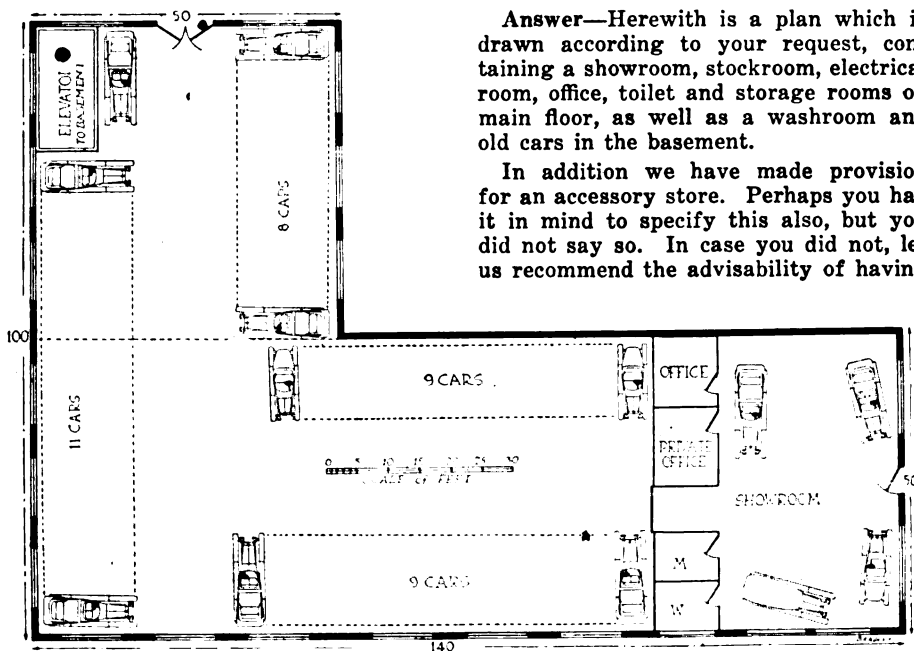
an accessory store, and not only that, but running it the way a store should be run. Just because the profit on one accessory sale is small do not lose sight of the fact that the total profits may well be comparable to the profits made on car sales.

In order to merchandise accessories properly you must have a store, one that is neat and attractive and separate from the showroom. Cars and accessories do not look well together, and accessory buyers distract car buyers, so therefore they should be as separate as possible.

We are not sure that the basement plan is just what you want; you were rather indefinite on this point. We should not advise you to store cars in the basement. It is all right to use it for a furnace room and a coal bin. That is what it is for, but do not store cars there. First, because it is damp, and, second, because it is a poor place to bring customers. It will cost very little, if any more, to construct a second story, and this is what you should do if you need the extra room.

## He Takes Only One

Editor Motor World: We run an automobile and tractor trade course and use your magazine very extensively. We have subscribed to a number of automobile magazines—sometimes six at a time—but are now taking only one, and that one Motor World.—North Dakota State School of Science, Wahpeton, N. D.



The display room is on the main street and the shop is in the basement

*A Department of*

# BETTER MECHANICS

No. 93

## Willys-Knight Service Methods

*These operations are based on the standard instructions issued to Willys and Overland service stations and repairmen, and amplified by observation of the methods actually pursued in the shops.*

### Removing Junk-Ring Click

**J**UNK-RING click in a Knight engine is a sharp metallic click, occurring at one-half engine speed. It is present under all conditions unless the cylinder in which the click is present is cut out or short circuited. It is caused by looseness or side play of the junk ring in its groove in the cylinder head.

A very slight click may gradually disappear with the accumulation of carbon but it is much better to immediately correct the fault as an excessive click will become worse instead of better as the car is driven.

1—Locate the junk ring at fault by short-circuiting the spark plugs of the various cylinders, one at a time until the click disappears. When the click stops, the indication will be that the faulty ring is in the cylinder that is shorted. A listening device of some kind will be found useful in this connection.

2—Remove the cylinder head.

3—Remove the junk ring from the cylinder head using the junk-ring spreader shown in Fig. 1. This tool is known

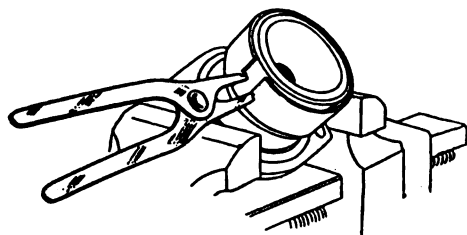


Fig. 1—Junk-ring remover

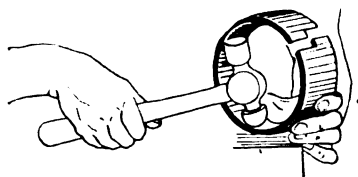


Fig. 2—Peening the junk ring

By J. HOWARD PILE

as S. D. 209 and is obtainable from the Willys-Overland Co.

4—Carefully clean off all the carbon from both the ring and its seat.

5—Peen the lower edge of the ring with the ball of the hammer as shown in Fig. 2. This will expand the metal at the lower edge of the ring so that the ring will be widened and will fill the groove.

6—Care must be used in peening the ring and the hammer must be used directly over the point of contact of the ring and anvil. The hammer must not strike the ring more than  $\frac{1}{8}$  in. from the edge.

7—After the ring is widened so that it will not enter the groove, it must be lapped to a perfect fit.

8—For this purpose, use a cast iron plate that is perfectly true, at least  $\frac{1}{2}$ -in. thick and about 12 to 18 in. square. Fig. 3 shows a plate that has been found very

satisfactory for this purpose. The grooves cut in the surface of the plate allow a greater amount of abrasive compound to be used without rounding the edges of the work.

9—To use the lap, charge it by sprinkling lard oil over the surface and then sprinkling the abrasive compound over the oil and then rub the two together until the mixture thoroughly covers the surface.

10—Place the work on the lap and move it over the surface with an eccentric circular motion, taking care to cover the complete surface of the plate. As the oil evaporates, more may be added until all the compound has worked into the plate or has been washed over the edges or into the grooves.

11—For very fine work, a small amount of abrasive should be used as there is a tendency for the compound to roll up on the edge of the work and round the corners. The most satisfactory abrasive is emery or carborundum of various grades from No. 80 to No. 150. No. 80 is the

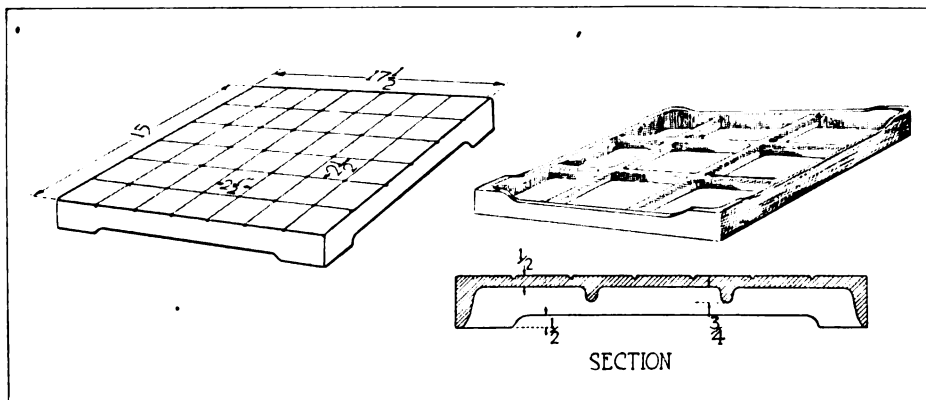


Fig. 3—Details of the lap used to grind the junk ring to size. The ribs in the casting prevent sag, and the grooves hold the abrasive

coarsest and should be only used for roughing. No. 150 is very fine and is used for polishing and benzine can be used with it instead of oil.

12—As a substitute for the oil and abrasive, emery cloth of the desired grade may be cemented down to a flat surface with shellac. This is not recommended, however, except in case of necessity as it will not produce a perfect job like the lapping plate.

13—The ring should be lapped down till it fits the ring groove closely.

14—To test it, roll the ring in the groove as shown in Fig. 4.

15—The ring should be entirely free in the groove, yet it should be tight enough so that the weight of the ring is sustained when it is hung as shown in Fig. 5.

16—Replace the ring on the cylinder head.

17—Spring it shut with the fingers.

18—If the ring does not bind, but springs out again at all points, and there is no looseness at any point, the fitting may be considered as satisfactory.

19—Place a new gasket on each cylinder head and replace the head. Put the gasket on the head, not on the cylinder.

20—Replace the cylinder head nuts and tighten them evenly so that the head will not be pinched more on one side than the other.

21—Replace the cylinder cover, tightening the nuts evenly.

## Clutch Repairing and Adjustment

**S**ERIOUS clutch trouble can be confined to three classes:

1—Clutch grabbing, which is caused by a dry or worn clutch facing, excessive tension on the clutch main springs or improper adjustment of the clutch plungers.

2—Clutch slipping caused by insufficient tension on the clutch springs, by the friction surface being so worn that complete engagement of the clutch is impossible by limitations of the clutch cone travel or by grease collection on the facing.

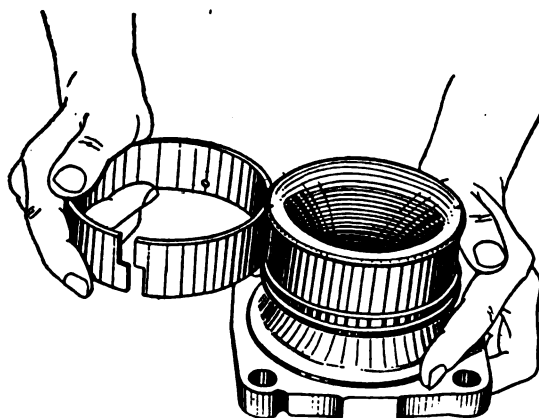


Fig. 4—Rolling the ring in the groove to test the lapping

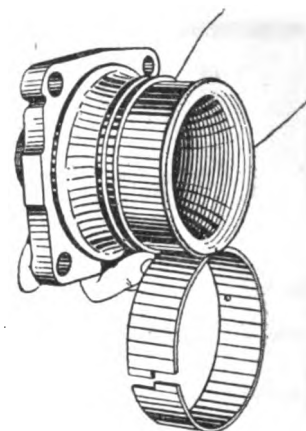


Fig. 5—The ring should hang its own weight

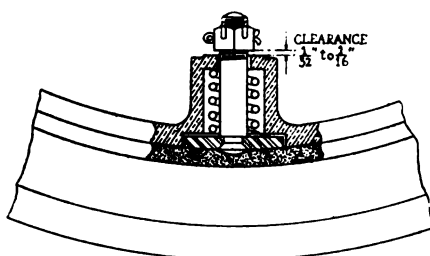


Fig. 7—Plunger clearance; clutch engaged

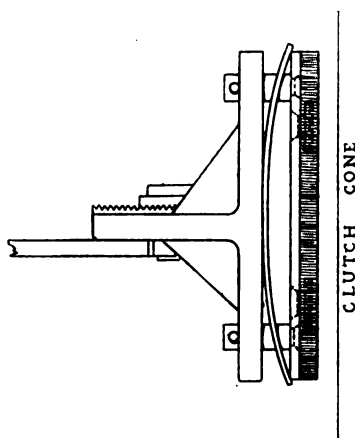


Fig. 8—Details of the clutch brake. The shaded part is fiber

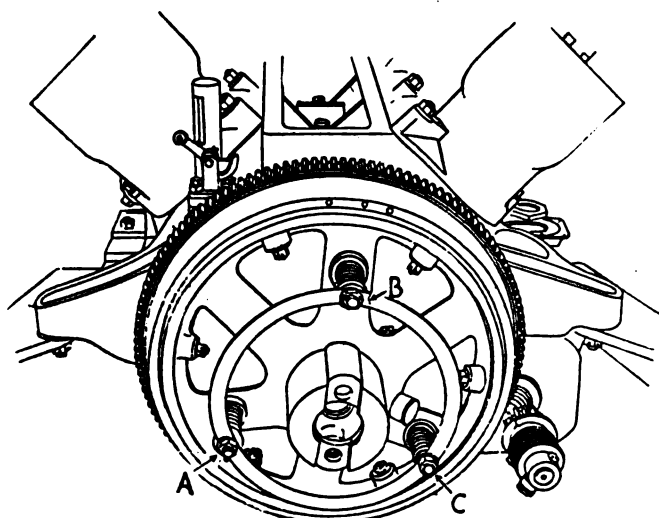


Fig. 6—Clutch mechanism. A, B and C are the main clutch springs, and the plungers are seen around the inside of the cone

3—Clutch sticking to the crankshaft extension resulting in dragging.

If the leather is exceptionally hard and dry, gradual engagement is impossible as the entire clutch leather surface engages at once. If the leather is worn down to the rivets holding the leather to the cone, and bears on the clutch surface in the flywheel, the clutch will grab. This will be denoted by squeaking as the clutch goes into engagement and may be distinguished from other grabbing trouble by this characteristic.

If the clutch springs have too great tension, the clutch will grab because of the fact that so much pressure is required on the foot pedal to release the clutch that it cannot be relieved gradually. Improper adjustment of the clutch plungers will cause grabbing inasmuch as their function is to allow gradual engagement.

### Proper Adjustments

1—To overcome dry leather, apply Neatsfoot oil, preferably with a grease gun in the space between the leather and the flywheel when the clutch is disengaged. Allow the clutch to come into engagement, then disengage again and continue this operation until the oil is thoroughly distributed over the surface of the clutch leather.

2—The clutch springs should be so adjusted that there is just sufficient tension to prevent the clutch slipping. This will insure a minimum amount of effort being expended on the clutch pedal for disengaging.

3—The clutch plungers must be so adjusted that they raise the clutch leather slightly above the surface of the clutch cone at the point over the clutch plungers.

4—The nuts on the clutch plunger stems that extend through the clutch spider should be adjusted to leave a clearance of from  $1/16$  to  $1/32$  in. between the nut and the spider when the clutch is fully engaged.

5—Adjust the nuts on the stems of the plungers to give the proper clearance, then disengage the clutch and see if the clutch plunger springs force the nuts up tight against the spider.

6—If there is any indication that they

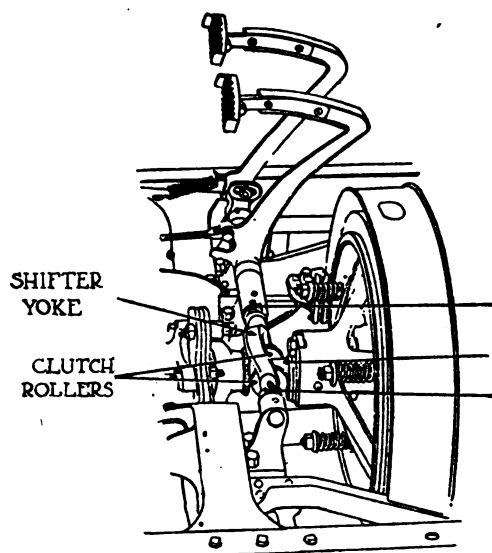


Fig. 9—The clutch rollers must bear uniformly on the clutch spacer shaft when the pedal is depressed and they should not touch when it is released

are not doing so, examine the plunger and see that it is free in the guide, and if it does not stick determine whether or not the spring is at fault by pulling down on the nut on the plunger stem.

7—If the facing is so worn that a thorough application of Neatsfoot oil will not eliminate the fault, a new clutch facing should be installed.

8—Grease may be removed from the surface with kerosene or by scraping. Should the leather be saturated with lubricating oil, plentiful applications of Fuller's earth will absorb the surplus oil and a treatment with Neatsfoot oil will overcome the fault. *Never allow water or gasoline to come in contact with the clutch leather as it drives out the oil and hardens the facing.*

9—If the clutch cone bushing that bears on the crankshaft is allowed to become dry, it will seize on the crankshaft and the clutch will drag or continue to rotate when the pedal is depressed. To overcome this fault it is usually necessary to replace the bushing and to smooth the end of the shaft.

#### Clutch Brake

The clutch brake should be so set that it stops the rotation of the clutch cone when the cone is drawn off its seat on the flywheel. If it is set too close, the clutch will stop rotating too soon and some trouble will be experienced in shifting gears. If it is too far back, the same trouble will be experienced due to the fact that the cone does not stop rotating immediately due to its momentum.

1—To set the brake properly, adjust it so that the cone starts to bear on the brake just as the cone fully releases.

2—If squeaking or chattering is heard momentarily after the clutch is engaged when the car is standing, or continuing until the gears are disengaged if the car is moving, the trouble will be found in the clutch brake due to excessive wear of the

fiber pad so that the cone strikes the rivets instead of the fiber.

3—To overcome this fault, replace the fiber.

4—Remove the brake entirely from the frame.

5—Take the cotter pins out of the guide dowels.

6—Chop off the rivets that hold the fiber pad to the brake shoe.

7—Clean off all the parts.

8—Put on the new fiber.

9—Rivet the fiber to the shoe.

10—Put the dowels through the holes, noting that the spring operates properly.

11—Insert the cotter pins.

12—Put the brake back in place.

13—Adjust as described in operations 1 and 2.

#### Clutch Roller Adjustment

Before attempting to adjust the clutch rollers, remove the floor-boards and with the clutch engaged and the gears out of mesh, allow the engine to idle. The clutch spacer must run true because if it runs out, it will be impossible to secure quiet clutch roller adjustment.

1—With the spacer running true, adjust the rollers so that the flat sides next to the spacer are equally distant from the spacer. This will prevent any tendency for the spacer to strike the sides of the rollers should it run out when the clutch is disengaged.

2—To adjust the rollers in this manner, loosen the spacing collars on the clutch shifter yoke on each side of the rollers.

3—Shift the yoke and rollers to the correct position.

4—The two rollers must each engage the spacer shaft when the clutch pedal is depressed, *at the same time.*

5—If there is a tendency for one roller to touch before the other one does, the spacer shaft must be bent to make them engage together.

6—The rollers must be perfectly free on their studs, otherwise flat spots will be worn on the face of the rollers which will produce excessive noise.

7—After the rollers are adjusted so that they bear uniformly on the clutch spacer shaft when the pedal is depressed, adjust the adjusting clevis or adjusting screw on the clutch pedal so that the rollers are drawn entirely away from the clutch spacer when pressure on the clutch pedal is released. This will prevent them from turning when the clutch is engaged.

## SHOOTING TROUBLES

#### Carburetor Adjustment; Not Oil Trouble

Editor Motor World: I am repairing a 1911 Overland car and find considerable trouble with oil. I went over the timing of the car and find it all right. When I started the car up I had the carburetor approximately adjusted and the engine throttled down all right and would respond on sudden acceleration but after the engine had run about 15 min. it would misfire and throw a terrible amount of smoke. There is an automatic lubricator on it and I shut off all feeds and opened the two pet cocks on bottom of the crank case so there was no sign of oil dripping out of them, and still the engine would smoke and run about 15 min. and misfire and then stop. It seems to carry the oil past the rings and still it has a good compression. Had cylinders off and find them O.K. Kindly let me know whether I can take off the lubricator and work a splash system and how far the crank bearing is to dip in the oil so I can get the right height of oil in crank case. Kindly give me your idea in regard to this trouble.—Adolph Meyer, Brooklyn, N. Y.

Reply—From the data you have given us, we are under the impression that your trouble is due to poor carburetion rather than lubrication trouble. You did not tell us the color of the smoke that comes out, consequently we are not sure on this point. If the smoke is black, it is a sure

indication of carburetor trouble, whereas if it is gray or bluish, this would indicate that the trouble came from over lubrication.

The symptoms you describe of the engine running a few minutes and then missing fire and banging away again with a cloud of smoke are usually the symptoms of too much gasoline. The engine runs for a little while and the mixture gets too rich and it misses a few explosions, the gas gets into the mufflers and then when one of the cylinders does fire, the combustion is communicated to the live charge in the exhaust pipe and muffler through the open exhaust valve and the whole business goes off. It is also possible that this trouble is caused by too lean a mixture. If you can tell us definitely just what the color of the smoke is, we might be able to give you a little more accurate information.

If you are quite sure that your trouble is from over oiling look to your piston rings. It seems odd that you should be troubled with an excessive amount of oil in the combustion chamber and at the same time have good compression in all the cylinders. There may be a leak somewhere.

We wouldn't undertake to take the lubricator off the car and put a splash system in as this is a very difficult thing to do and make a good job of it. We doubt very much whether this would be satisfactory.—EDITOR.



# Repairshop Shortcuts

*From Motor World Mechanics*

## No. 1645—CHEVROLET CLUTCH-SPRING REMOVER

A clutch-spring remover for the Chevrolet 490 is made from a piece of 2 x  $\frac{3}{8}$  in. iron 8 in. long with a half twist on each end and so forged that when the center hole is bored it will come in line with the crankshaft. Holes  $\frac{1}{2}$  in. in diameter are bored in the ends to correspond to the two holes for the gearset bolts and cap screws hold the tool in position. The actual removal of the spring is accomplished with a long  $\frac{1}{2}$ -in. bolt, a block of wood and a slotted piece of pipe being placed between the end of the bolt and the spring washer.—H. A. Schweinbold, Peoria, Ill.

## No. 1646—WRENCH FOR STEWART STEERING-ARM NUT

This is a special wrench for turning the nut that holds the steering arm in place on the Stewart truck. It is for working in close quarters where only a small movement of the wrench handle is possible. A 60-deg. slot is filed in the center of each face and this allows twice as many "bites" as with the ordinary wrench.—Fisher Proctor, Inc., Boston, Mass.

## No. 1647—BUILDING UP SHORT BATTERY POSTS

Battery posts that are too short are built up by starting the threads of a Ford adjusting yoke on the short post till there is a good joint between the threads and the post. Lead is then poured from a ladle into the hollow yoke to the desired height. This lead will join with the old post if the old post has been previously scraped clean and a little flux applied. When the lead cools the yoke is screwed off leaving a longer post.—Merritt B. Harmon, Ford Service Station, Carthage, S. D.

## No. 1648—ADJUSTABLE SPANNER WRENCH

This adjustable spanner wrench is made from a bicycle wrench by filing a V in the end of the handle and welding a spanner arm on the movable jaw. This makes it possible to move the spanner arm back and forth to accommodate different diameters. Two bits are made, one round and the other flat so that the tool can be used on either kind of work. These bits fit into a hole in the end of

## Make a Dollar

*HOW often have you been compelled to rack your brain to overcome some difficulty? But when you did find a solution—what satisfaction it was! Well, here's a chance for you to dig some of those life-savers out of their hiding places and put them to work for your fellow-craftsmen. Send them to Motor World. We will pay you a dollar for every one accepted for publication.*

*The only requirements are these:*

1—Describe the shortcut briefly but clearly, in few words.

2—Send a sketch, in pencil or pen, no matter how rough; our artists will finish the job.

3—Write on ONE side of the paper only.

4—Sign your name and initials, the name of the company you are with, and the town.

*Write plainly. If your name is unusual, print it in capital letters.*

the arm.—Oscar Carlson, Oscar Carlson & Son Garage and Machine Shop, Dannebrog, Neb.

## No. 1649—BOLT TONGS

Bolt tongs for replacing bolts or nuts in inaccessible places on the engine or chassis are made by bending drill rod of a suitable size to the shape shown. The spring coil formed in the end keeps the tongs sprung together to hold the work till released by pressing on the sides. The coil formed on one of the arms keeps the jaws pressing against each other so that they will not have a tendency to flip sidewise.—George Grillier, Mgr., French Machine Shop, Red Bank, N. J.

## No. 1650—EXHAUST-GAS DEFLECTOR

An exhaust-gas deflector for use on mufflers without any tail pipe is made by bending and cutting a piece of heavy sheet steel as shown. A hole is bored or punched in the lug and the device is attached by removing the nut in the center of the muffler and holding it under this. A lock washer placed between the muffler

and the deflector will prevent rattling.—Bernard Hopwood, Standard Garage, Whitehouse, Ohio.

## No. 1651—CYLINDER LAP FOR FORDS

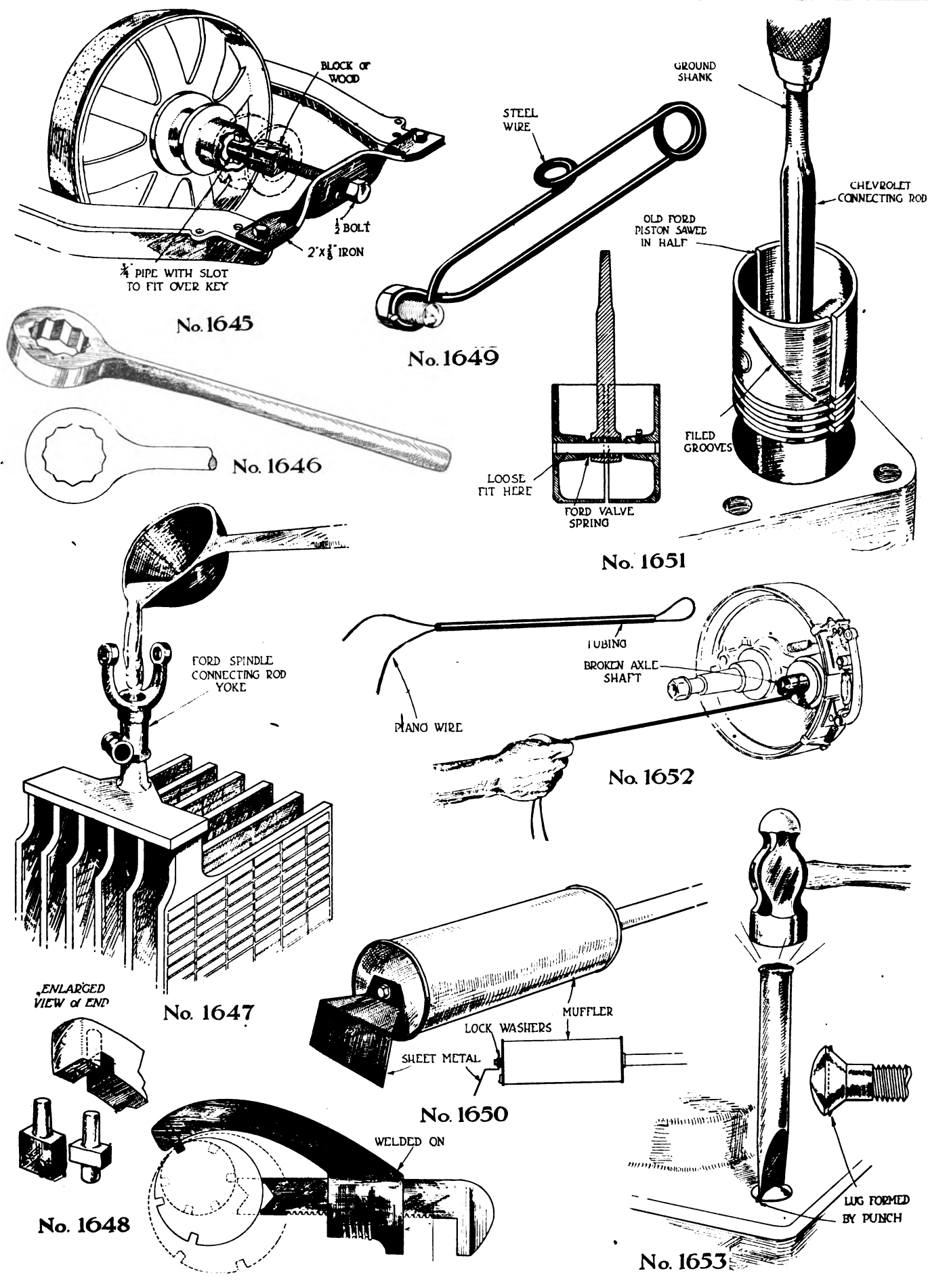
A cylinder lap for Fords is made from an old Ford piston which is cut in two lengthwise with a hack saw. A Chevrolet connecting rod is ground on the big end till it fits the chuck in the drill press and the small end drilled out so that a Ford valve spring will go in easily. A piston pin is fitted in the piston halves so that it is a tight fit in one side and a loose fit in the other. The valve spring goes over the piston pin, springing the halves of the piston apart, and the connecting rod goes over the spring. The Ford cylinder block is bolted to the table of the press, and the cylinder lapped with compound, the piston being fed up and down by hand while the spindle revolves slowly.—F. B. Potter, Potter's Garage, Potter Brook, Pa.

## No. 1652—AXLE SHAFT REMOVAL

When an axle driving shaft breaks on an internal-gear-drive axle the break quite often takes place just back of the pinion which drives the gear on the wheel. Some difficulty may be experienced in removing the shaft, as there is no easy way of reaching it even after the wheel and pinion have been removed. The difficulty is solved by a tool consisting simply of a piece of copper tubing about 2 ft. long and a piece of fine piano wire more than twice as long. The wire is doubled and slipped through the tube to form a loop at one end. This end is inserted in the axle and the loop worked over the broken end of the shaft. Then the ends of the wire at the other extremity of the tube are pulled tight and the shaft is thus lassoed with sufficient firmness to accomplish its withdrawal.—Fisher Proctor Inc., Boston, Mass.

## No. 1653—LOCKING MAGNETO SCREWS

Screws in magnetos or generators or in other places where the screws bed in soft metal are locked in place by using a punch to force a small fin out from the side of the screwdriver slot into the soft metal, this keeping the screw from turning. The punch is made from tool steel. is formed somewhat like a screwdriver blade but with the edge on a bias and the lower part of the tool is tempered fairly hard.—R. J. Everest, Electric Equipment Co., Los Angeles, Cal.



# Editorial Observation

## The Sherman Law

**A**BOUT a score of years ago a man named Sherman, a United States Senator from Ohio, fathered a bill in Congress aimed at the big corporate groups which were becoming a menace to American business. The bill became our present-day Sherman anti-trust law.

Since the bill was passed it has been used for almost everything, including a few cases of the particular kind for which it was intended to be used.

To-day the law is as archaic as would be Noah's ark in transatlantic service.

It should be repealed.

There should be a new set of laws relating to business.

There **MUST** be a new set of laws or business will suffer.

If business suffers America may encounter a calamity which will be more far-reaching in its results here than has been the great emergency through which we have just gone.

It is hard to comprehend why such a law can remain on our statute books when there is such an overwhelming sentiment against it. Business associations in great number have gone on record against the law. Among the latest was the great War and Reconstruction Conference of the Service Committees of the Chamber of Commerce of the United States at Atlantic City.

Four thousand business men yelled and cheered when bricks were heaved at this obnoxious measure.

The question is: Can Congress hear all this noise?

Sometimes Congress has difficulty in understanding about business. Our legislative halls are filled with lawyers. They know law and—in some cases—that's about all. There are legislators who have a knowledge of business, but they get all snarled up in the legal meshes of our law-making centers and debate and quibble while big things that should be done are left undone and the net result is little or nothing.

One of the biggest jobs before the people of the United States to-day is the education of their legislators. For too long the people have voted straight tickets, have cast their ballots and have forgotten their electoral duty except as they have criticized and complained—when it was too late. Then, like children, they have done the same thing all over again at the next election and have renewed with mystifying regularity the bonds against which they complain.

It is **NOT** the fault of Congress that business finds itself in these dire straits to-day.

It is **BUSINESS** alone that is to blame.

Business is nothing other than the people.

We have forged our own fetters. We have made hard our own bed.

And how?

By paying little attention **BEFORE** elections to the things we wanted our legislators to do.

We have done the very things of which we accuse the members of Congress. Instead of bringing forth the big things that need legislation and demanding of candidates where they stand on those things we have let the mud and dust of politics bedim our vision and have cast our ballots on the basis of some petty local prejudice while big national topics have been forgotten.

And between then and the next election we have complained and have wondered why legislators didn't do things we wanted done.

Right now we are wondering what chance there is for a change in the laws governing business. We wonder if Congress will ever repeal the Sherman law and put a new measure on the books.

Congress will do whatever the people want done—provided the people assert themselves and make their wishes known. If the people demand of their senators and representatives that immediate attention be given to business legislation and that less time be spent in building political fences the legislators will discover that their biggest political fence is business legislation.

Then we'll have action.

Have **YOU**—no matter who you are—ever written a plain and positive letter to your representative or senator, telling him that you want **NEW** business laws?

Do you know what Congressional district you're in?

Do you know the name of your senator?

Do you know the name of your representative?

Do you know how much salary a year you are paying these men to represent you?

Do you know how they have voted on vital questions?

Do you know how they propose to vote on other vital questions?

**WHY** did you vote for these men?

**WHAT** was the issue on which they were elected?

**BEFORE** their election did you find out **WHAT** they proposed to do for **YOU**?

You can ask yourself questions all day and find that you can't answer them.

Few of us have paid the attention we should to the Government that makes laws for us.

**IT IS TIME TO WAKE UP.**

# LETTERS *from* READERS

## Windings for Magnet Recharger

Editor Motor World: I have two magnet charging cores  $\frac{7}{8}$  x  $4\frac{1}{4}$  in. actual dimensions of steel core, with insulators 1 x  $4\frac{1}{4}$  in. What and how should I wind these for 6-volt current? Can one use 110 a.c. or must it be d.c.? Thanking you in advance, I remain.—A. L. Bennett, Buffalo, N. Y.

Reply—If you will wind three layers of No. 12 magnet wire on each core this will give you a very strong magnetizing effect. With such a winding, the recharger cannot be left on the battery for any great length of time, as it will overheat. However, there is no great advantage in keeping the circuit closed for more than a few seconds at a time. This winding is intended for use with a 6-volt battery. Alternating current cannot be used for recharging magnets regardless of the voltage. If you intend winding your magnets for 110 volts, direct current, the winding would have to be decidedly different, the wire much finer and many more layers.—EDITOR.

## Planetary to Sliding Gearset

Editor Motor World: I own a model 38 1910 Overland car and it has the old style planetary gearset. I want to change this to sliding gear type, and would be glad to have you give me the proper information as to how to proceed and from whom I can procure the necessary parts.—Corporal Ben W. Hearne, Camp Sheridan, Aja.

Reply—We would not advise the change in your Overland car that you suggest.

The selective sliding gear which is put in the newer Overland cars could not be fitted to the car with the planetary transmissions without a considerable amount of trouble and machine work.

Of course, this operation is possible, and it would be possible to secure any make of transmission which is the proper size and capacity for the car; these transmissions could be secured new from several manufacturers who make them, or they might be obtained second-hand from some concerns who make a practice of tearing old cars apart and selling the different parts. Even if you bought a second-hand transmission it would cost a great deal to make the changes, unless you desire to do the work yourself and have the machine tool equipment with which to do it, and even then it would not be possible unless you value your time at nothing at all.

After you had completed the installation, if you had done it correctly, the car would of course operate all right; on the other hand, if you had not done

it correctly, you will have not much to show for your work, and even if it does work correctly the car is simply a 1910 model still, with a different kind of a transmission in it, and there does not seem to be much marketable value to this kind of a car, from the money standpoint.

If you will write us again, telling us exactly how much money you wish to spend on the car, and any other details that will assist us, we will be glad to tell you where you can get the transmissions, but, as we said before, none of them will

exactly fit the car, and many changes would have to be made in the construction of the frame and other parts.—EDITOR.

## Ford Magneto Principle

Editor Motor World: I wish you would be good enough to explain how the current in the Ford magneto is generated. Does the magnetic flux pass through from the cores of the magneto? How does the current flow through the wind-

## Women Keep Tire Shop Going



Editor Motor World: We lost most of our men in the draft. We could not stop business so we hired twenty-five girls. We still have sixteen of them and they are making good.—Wichita Double Tire Co., Don M. Campbell, Wichita, Kan.

ings? I claim that the current is alternating and in one revolution of the fly-wheel completes sixteen cycles. Another man claims this current is pulsating in one direction. Who is right?—Frank Cais, Aurora, Col.

**Reply**—The current in the Ford magneto is generated by passing alternate north and south poles of permanent magnets across and very close to the base of the cores of the electromagnets, which are wound with wire and connected to each other in series. The electromagnets which correspond to the armatures of other magnetos are all fastened on a disk and this disk is held stationary in the crankcase of the engine.

The wires of the various coils being connected together makes the coils in series and one end of this series is attached to the disk, thus grounding it to the engine, the other wire, forming the other end of the coil, being attached to the magneto terminal which is insulated from the case, and which is found at the top of the transmission case. It is from this terminal that the current is led to the lights and coils.

There is no actual contact between the electromagnets and the permanent magnets, the space between the two being approximately a thirty-second of an inch. There are sixteen permanent magnets mounted on the flywheel of the engine and these are revolved in front of the electromagnets and it is the alternate passing of north and south poles that induces the alternating current in the electromagnets, the current alternating every time a pole is changed from north to south or vice versa. The current will, therefore, alternate the Ford magneto sixteen times during one revolution of the engine.

There is no truth in the statement that the current is pulsating in one direction. This could not be so because there are both north and south magnetic poles revolving past the cores of the electro magnet.—EDITOR.

### Wants Better Grease Cups

**Editor Motor World:** A great deal of trouble is experienced with grease cups on certain makes of cars, especially the cups on the spring bolts. The cups are made of pressed sheet metal, the threads are very poor, and are not faced off, therefore they are hard to screw on and generally cross threads, or the grease oozes out through the poorly fitted threads. Just as soon as the grease gets a little hard in the bearing the grease cups screw on hard due to compression of grease and result in stripping the threads in the cup. The grease cup bolt threads are hardened; therefore they seem to remain in good condition. I note the higher priced cars are equipped with oil cups instead of grease cups. If oil cups are giving satisfaction could they be installed on other cars?—E. H. Doda, Vallejo, Cal.

**Reply**—The trouble that you are experiencing with the grease cups is quite a common one in the less expensive cars. A multitude of small details, such as

grease cups, are not gone into in sufficient detail. That is the reason the car doesn't cost so much as the better cars where all these details are carefully considered and the workmanship on all the small and seemingly insignificant parts is of the finest. If you want all these details the best you have to pay for them. You can't get something for nothing.

The use of oil cups is not recommended, especially on the springs. Oil cups are all right and work mighty fine if you oil them every day, but if you happen to forget to put a little oil in the cup for a couple of days, the spring bolt goes absolutely dry and wear takes place at a rapid rate of speed. Grease cups on the other hand can be forgotten for a few days without any great damage happening as there will be a small amount of grease remaining in the bearing or on the bolt. For this reason, we would suggest that if you want to rectify the trouble that you get a better grade of grease cups and put them on in place of the grease cups that are already on the car.

The threads used on grease cups are what are known as standard pipe threads, and on almost all cars they are either  $\frac{1}{8}$  or  $\frac{1}{4}$  in. size. A very few cars use  $\frac{3}{8}$  in. size, but this is an extremely large size. If you will unscrew one of the grease cups and measure the diameter of the shortest part that goes into the bolt, you can easily determine whether it is  $\frac{1}{8}$  or  $\frac{1}{4}$ . The  $\frac{1}{8}$  size will measure approximately  $\frac{3}{8}$  in. in diameter, while the  $\frac{1}{4}$  in. size will be in the neighborhood of  $\frac{1}{2}$  in. in diameter.—EDITOR.

### Oil in the Cooling System

**Editor Motor World:** Why could I not use a light grade of engine oil in the radiator of my Ford truck during the winter months? What would be the advantage or disadvantage or would it be ruinous to the cooling system? Would it cool as efficiently as water?—Don A. Wright, Rochester Mills, Pa.

**Reply**—The use of oil is not recommended in the cooling system of any car or truck, except under the most extreme circumstances. There are several good reasons for this. In the first place, the oil is not nearly so good a conductor of heat as water, and it takes the oil so long to take the heat from the cylinder walls and so long for it to lose its heat

### He Could Run a Stockroom



**W**OUNDED men are now being taught useful occupations by the Government. This picture shows a one-armed soldier learning to operate a typewriter. Undoubtedly a great many disabled men are finding employment in various branches of the automotive industry. If you have any such men in your organization, please send Motor World their photographs, showing them at their work, with a short description.

in the radiators that the cylinders can very easily become overheated.

In the second place the oil eats the rubber hose connections and rots them away. It is doubtful if it would be possible to use oil under any circumstances in a thermo-syphon system such as the Ford car employs, because the oil is slow heating, slow cooling and slow moving. The oil would not be detrimental to the metal parts of the cooling system, but it would let the cylinders get so hot that the oil film would burn off and scored or stuck systems would result. Some experiments with oil cooling have been carried out on tractors, the purpose being to keep the cylinders at a higher temperature for burning kerosene. In this case, however, it is probable that special arrangements have been made in the design of the jacket to give more room so that the oil can move around.—EDITOR.

### Best on Motor Mechanics

**Editor Motor World:** Have been a reader of Motor World for some time. It is the best paper on motor mechanics I have yet seen.—Frank J. Marwood, Pincher Station, Alta., Canada.

### The Best Trade Paper

**Editor Motor World:** Best wishes to Motor World, the best trade paper published.—H. W. Pelton, Pelton's Garage, Lake Helen, Fla.

### Likes the Shortcuts

**Editor Motor World:** I think the repairshop shortcut page is very valuable and interesting to repairshop men.—Ben L. Cohen, Buffalo, N. Y.



# THE TRAILER—POTENTIAL BUSINESS BUILDER

## Some Ready-Made Sales Arguments

A TRAILER bears the same relation to a truck or passenger car as does a wheelbarrow to a man—both operate on the principle that “it is easier to pull than to carry,” and both permit a large increase in carrying capacity with little increased effort. But the principle has been applied to motor hauling only in the past few years, and its value has only been realized to any extent in the past two years.

Three distinctive types of trailers are at present being built, the four-wheel type, the two-wheel semi-trailer type, and the two-wheel trailer. Each is popular, and each adapted to a certain kind of work.

The four-wheel type, or the trailer proper, is used in connection with the truck, which carries its normal load in the usual manner, and approximately doubles the capacity of the truck. This type of trailer is best adapted to heavy hauling, such as small castings, etc. It is also best adapted to those truck users that desire to use the truck alone at times, for light hauls, and for storage and transfer work.

A semi-trailer, however, converts a truck into a six-wheel permanent arrangement. It is not used without the truck, nor is the truck used without the trailer. A fifth wheel attachment is necessary between the truck and semi-trailer to provide flexibility, care for road shocks and permit the negotiation of uneven roads.

The lumber trade in particular is finding this type of trailer well adapted to its needs, and in fact it has been adapted to work of any nature—either large bulk load capacity or large load capacity, for it practically triples the load capacity of the truck.

The reason that the truck fitted with a semi-trailer carries only its normal load is clearly understood by considering the full load of the semi-trailer to be divided into three parts, each equal to the normal load capacity of the truck. It is seen that that of the

### *Hit the Trail With a Trailer*

**W**HETHER you sell passenger cars, trucks, or simply run a garage or repairshop, there is some car owner, some truck owner in your community who can carry on his business more efficiently by means of a trailer.

*The laundry man, the butcher, the baker, the farmer—anyone who has material to carry, needs a trailer.*

*The business is your legitimate business, and the prospects your legitimate prospects. Here is what you should know about trailers.—EDITOR.*

two rear divisions balance on each side of the semi-trailer axle, and are carried by it alone—none of their weight ever reaching the truck axle, which carries only that third of the load directly above it.

Investigation has proved that a motor truck can easily pull at least three times its normal load, that is, a 1-ton truck can pull a 3-ton load, a 2-ton truck can pull a 6-ton load, and so on. And the balancing of the load on the rear axle of the trailer permits this to be done without overloading the trucks under ordinary road conditions.

The use of a trailer also effects another great saving in the first cost of a hauling equipment—in some cases amounting to 30 per cent of the original investment. The reason for this is obvious. It may be cheaper to buy a low-capacity truck, and obtain the necessary capacity by the use of a trailer, than to buy a truck complete that will carry the desired load.

Maintenance expenses of the truck and trailer equipment have been found to average about 15 per cent more than the expenses for the same truck without the trailer—and this amount on the average is 10 to 20 per cent cheaper than the upkeep of a truck that alone would have the required capacity.

Another feature that effects a great saving is that interchangeability of trailers is possible—thus keeping the truck busy all of the time. One truck, equipped with three semi-trailers, can

be carrying one trailer, either empty or full, while the other two are being unloaded or loaded. This keeps the largest part of the investment working all of the time—instead of having to wait while the load is being moved.

Experience has shown that it is poor economy to attempt to use steel tires on either trailers or semi-trailers. Not only is the resistance of the trailers greatly increased—thus decreasing the speed, and increasing the operating costs—but the

fact that the load is uncushioned immediately increases the upkeep costs. In some cases this may amount to a 10 per cent increase.

Trailers and semi-trailers are constructed for all kinds of loads, and may be adapted to practically any truck, converted passenger car, or passenger car. It is stated that they may be handled with great ease in crowded streets or in narrow alleys, and most of the semi-trailer attachments require little more space than do trucks of similar capacity.

The trailer and semi-trailer have pointed the way to greater truck efficiency, and are rapidly coming into their own. Traffic requirements have rapidly increased in the past year, and will show still greater increases in the coming year. To the dealer this means more business in a new field.

### **Stewart-Warner Engineer Dies**

CHICAGO, Dec. 21—John E. Genn, chief engineer of the Stewart-Warner Speedometer Corp., died Dec. 15. He had been connected with the company since its infancy; in fact, was one of its first ten members. He has been successively engineer, assistant chief engineer, chief inspector and chief engineer. He was 35 years old.

### **Staff & Eckhouse Move**

CHICAGO, Dec. 20—Staff & Eckhouse have moved from 1432 Michigan Avenue to 616 of the same street. The firm is a manufacturers' representative.

# The RETAIL NEWS

## New Truck and Tractor Dealers

The John Doran Co. has established a special department devoted to Packard truck service in its new building at Third Avenue and Wall Street, Spokane.

The Brewer Motor Car Co., 1130 Sprague Avenue, Spokane, has secured the agency for the Indiana truck.

The Fosdick Auto Co., Spokane, has been appointed sales agent for the Kelly-Springfield truck.

Winchester & Bremer, 310 North Rose Street, Kalamazoo, Mich., have taken the agency of the Panhard truck, manufactured by the Hamilton Motors Co., Grand Rapids, Mich.

The Brewer Motor Car Co., Cole, Saxon and Westcott dealer in Spokane, has added the Indiana truck and the Truxton truck attachment to its lines.

The Fosdick Auto Co., Third Avenue and Post Street, Spokane, which has been handling the Reo, Nash and Pierce-Arrow lines, has secured the agency for the Kelly-Springfield truck.

The Universal Auto Co., 715 Second Avenue, Spokane, will merchandise the Fordson tractor in that territory.

The Watson Automobile Co. of Sioux City, Iowa, has been appointed distributor for Parrett tractors in the territory comprising northeastern Nebraska, northwestern Iowa and southeastern South Dakota by the Parrett Tractor Co. of Chicago.

J. H. Graham, Portland, Ore., has taken the agency for the Denby truck for Oregon and southwest Washington. His salesrooms at Tenth and Stark Streets are being remodeled and enlarged.

The Chicago Pneumatic Tool Co., Chicago, has appointed McGrath & Co., Boston, Mass., and J. E. Dare, Harrisburg, Pa., distributors of its motor trucks.

The Rainier Motor Corp., New York City, has appointed the following distributors of its trucks: Henry Mossbach, Seattle; Chilton & Snyder, Charleston; A. J. Whissel Co., Inc., Buffalo, and S. L. Nierop & Co., New York City.

Eugene F. Lally & Sons Co., Boston, Mass., has been appointed distributor of the Triangle truck for the New England States.

Murphy-Palmer Motor Co., Fargo, N. D., has been made a distributing agency for the Nash line of cars and trucks.

John P. Snyder Co., 407 Tenth Street S., Minneapolis, handling Fiat and Premier cars, has become Snyder Automotive, Inc., having taken on distribution of the Selden truck also. John P. Snyder is president, R. A. MacMillan is vice-president and general manager and C. A. Davis is secretary and treasurer.

A. Bruckner & Co., 119 West Central Avenue, Minneapolis, has been formed to distribute the Parker truck in Minnesota and North Dakota.

R. R. Schlundt and Howard Schaeffer, Cleveland, have taken the distribution of the Whitney tractor in the State of Ohio. The tractor is manufactured by the Ohio Mfg. Co., Upper Sandusky, Ohio.

The Western Truck & Tractor Co. has secured a distributing agency for the Garford truck and opened salesrooms at 1201 Sprague Avenue, Spokane, Wash., with L. R. Pearson in charge.

The Spokane Auto Co., W. W. Trumbull, manager, has moved to larger quarters at 820 Second Avenue, Spokane, Wash., and will handle the Plowman tractor.

## Among Dealers, Garagemen and Repairshops

R. M. Wade & Co., Inc., Portland, Ore., have opened a Ford salesroom at 910 North Monroe Street, Spokane, Wash., with L. E. Beeson as manager.

The Sunset Motor Co. has opened salesrooms and service station at 1212 First Avenue, Spokane, Wash., and handles the Cadillac, Hupmobile and Maxwell lines. E. R. Fosdick, formerly of the Fosdick Auto Co., has assumed management of this branch.

C. C. Sprinkle and Ernest Moe have purchased the agency and garage operated as the Hillyard Auto Co. at Hillyard, Wash.

The C. Norcross Tire Co., Los Angeles, has moved to 1844 South Figueroa Street.

Cleland & Wondersee have bought the garage of Dick Stewart at Topeka, Kan.

H. B. Flynn and Walter Loomis have opened a battery repairshop at 209 North Santa Fé Avenue, Salina, Kan., and will do business as the Vesta Battery & Electric Co.

H. S. Stephenson has bought the interest of P. H. Johnson in the A. A. T. A. Garage, Salina, Kan.

Weist & Nelson have opened a battery station at 118 West Ninth Street, Junction City, Kan.

H. A. Burns has opened a new garage at Junction City, Kan., and will do business under the style of Merchants Garage Co.

The Salina Buck Co. has added a battery department and will distribute the Columbia battery, Salina, Kan.

W. H. Imes Automobile Co. has completed a \$10,000 garage and salesroom at 205 Pontz Avenue, Manhattan, Kan. It will be a branch of its Topeka store.

R. B. Bryan has opened a tire shop at 111 East Seventh Street, Topeka, Kan.

Smith Auto Co. has taken over the repair shop of the Service Truck Co., Topeka, Kan.

Bruner & Aten have leased the repair department of the Ortner Garage.

Billiey-Walker Service Co. has moved its battery service station from Cripple Creek, Col., to Canon City, Col.

Tyler Tire & Accessory Co. has opened a tire store at 112 West Seventh Street, Pueblo, Col.

C. E. Overton has bought the interest of E. Parker in the L. & O. Garage, Hutchinson, Kan.

Harry H. Davis has bought the Auto Hospital from B. Swink.

Powell Overland Co., Clayton, N. M., has sold its garage to C. E. Williams.

C. C. Henderson, formerly Oldsmobile agent at Canon City, Col., has moved to Pueblo, Col., and will distribute the Oldsmobile through southern Colorado.

A. S. Porter and J. S. Thatcher have opened a vulcanizing shop at 310 Santa Fé Street, Pueblo, Col., and will do business as the Elite Tire Shop.

Ralph Bush has the vulcanizing shop of T. W. Dunstan, Syracuse, Kan.

George M. Blakeslee, Pontiac, Mich., has opened an automobile accessory store in the frame building at South Saginaw and Railroad Streets, which he has remodeled for the purpose.

The Holmes Motor Sales Co., 199 West Fifth Street, has been formed to handle the Holmes car. A. H. Clark is manager.

The Automobile Owners Tire Corp., Minneapolis, has opened a branch office at 71 Thirteenth Street S. The main office is in St. Paul.

The Hood Tire Co. has opened a direct factory sales branch at 27-29 Third Street N., Minneapolis. It will have five traveling salesmen and will handle Minnesota, the Dakotas, northwestern Wisconsin and upper Michigan. Charles Schoneman from the Chicago branch is manager.

The Bearings Service Co. has opened a factory branch for Timken, Hyatt, New Departure and Jaxon rim companies in a new building at Harmon Place and Tenth Street, Minneapolis. Half of the building front is to be occupied by the United Motors Service, Inc., factory branch for the Delco, Klaxon and Remey companies.

Plato Garage, Plato, Minn., has passed to the management of Charles Brinkman, Glencoe, Minn.

O. K. Bjore, Walnut Grove, Minn., bought the C. L. Moline repair business and will add accessories.

Issan and Ben Young, Waubun, Minn., bought the interest of their partner, L. A. Faucher, in the garage.

William Rohweder, Pipestone, Minn., has taken over the business of one of the S. L. Hirschy garages.

L. Owen, Long Prairie, Minn., bought the J. P. Shaver Garage.

Johnson Garage, Farmington, Minn., has been sold to A. S. Chase, Minneapolis.

H. H. Chrisman, Wahpeton, N. D., bought the controlling interest in the Wahpeton Garage Co.

Ben Lium, Walcott, N. D., bought the Anderson Bros. Garage.

E. E. Champion, Valley City, N. D., bought the Hanson Garage.

H. J. Becker, Wahpeton, N. D., retired from the garage business of Eberly & Becker and will engage in business for himself.

Gilde Automobile Co., Fargo, N. D., moved to Union Transfer Building.

George Supry, Monango, N. D., bought the J. L. Terry Garage and shop.

J. W. Daniels, Berlin, N. D., bought the Berlin Garage from G. E. Boise.

G. O. Christianson & Sons, Reynolds, N. D., bought the Knutson Garage.

A. E. Helseth, Alkabo, N. D., bought the A. E. Rude Garage.

Vang & Nelson, Hillsboro, N. D., have dissolved partnership. E. D. Vang will continue the business.

J. E. Sandlie, Inc., Grand Forks, N. D., is a new automobile firm. Sandlie has sold his interest in the Grand Forks Overland Co.

O. Hemely and Middleton Bros., Gilby, N. D., bought the Haddow Garage.

Jesse Benton, Binford, N. D., sold his garage to F. G. Lewis and H. B. Hanson.

Louis Lindstrom, Lisbon, N. D., has bought the Lisbon Motor Co. from Fred Gardner.

Grant Lovett, Berlin, N. D., has rented the G. E. Boice Garage.

Jess Kelly, Marmarth, N. D., has rented the Frank Gibbs Garage.

J. P. Shaver, Long Prairie, Minn., has bought the Henry Robertson Garage.

E. A. Cooper, Dunnell, Minn., has bought the interest of his partner, H. C. Clute.

Sauer Garage, Pine River, Minn., has been sold to B. A. Michener, Poplar River, Minn.

Red Wing Garage, Red Wing, Minn., has been bought by H. M. Thurber, Ellsworth, Wis.

A. & L. Brooks, Magnolia, Minn., has sold his garage to E. E. Klinkenberg, George, Ia., and J. G. Moody, Adrian, Minn.

Lawrence Adams, Jordan, Minn., has withdrawn from the garage firm of Streitz & Adams.

Oscarson & Johnson, Elk River, Minn., has bought the E. H. Foley Garage.

Frank Dooley, Belleplaine, Minn., has bought the J. F. Grosser stock in the Belleplaine Auto Co.

E. A. Berg, Little Falls, Minn., has bought the B. Burton interest in the E. A. Berg & Co. Garage.

H. E. Hedren, Lafayette, Minn., has bought the Michaud interest in the garage firm of Michaud & Isenberg and the firm now is Hedren & Isenberg.

W. H. Allen, Walker, Minn., has leased Motor Inn from Tony Potvin.

Sander Motor Co., Northfield, Minn., is now managed by C. C. Wagner, Owatonna, Minn.

G. B. Knight, Rush City, Minn., has taken over the B. G. Wells & Sons Garage.

S. L. Hirschy, of Pipestone, Minn., sold a garage to Timothy O'Connor, Bemis, S. D.

A. & T. Morrill, Brown Valley, Minn., has bought the Burnett Garage.

W. H. Hilgers, Jordan, Minn., took over the Lund & Larson Garage.

J. M. Zeldier, Chisholm, Minn., has sold his garage interest to Fred Lang, Racine, Wis.

H. C. Wood, Morton, Minn., has bought the Marquette Auto Co. Garage.

Arthur Graham, Pemberton, Minn., has bought the W. R. Atcherson Garage and put I. M. Southwick in charge.

E. H. Spaulding, Osakis, Minn., has bought the Peter Rutten interest in the Osakis Auto Co.

John Booth, Staples, Minn., has bought the Ralph Jerome automobile business.

The Electric Vehicle Co., Seattle, has been succeeded by O. L. Willett & Co. O. L. Willett will head the enlarged organization that will handle the Detroit Electric in Seattle.

Henry & Moore, owners of the Central Garage, Klamath Falls, Ore., have sold their interests to Harry Stilts of that city. The firm handles Chevrolet, Mitchell and Chandler cars.

North End Garage, Centralia, Wash., recently opened for business, with A. H. Carpenter & Co., in charge.

The Tire Sales & Service Co., Seattle, will hereafter distribute Kelly-Springfield tires. Henry E. Smith, manager of the Kelly-Springfield motor truck branch in Seattle for many years, is at the head of the new organization.

Charles Shields and W. M. Livengood, owners of the Shields-Livengood Motor Co., Eleventh and East Pike Streets, Seattle, have purchased the interest of Ben Shields in the business and are now sole owners.

Roy W. Corbett, Seattle, has taken the agency for the Rauch & Lang electrics for western and central Washington.

The Laher Auto Springs Co., Seattle, will install new machinery in its plant at 1409 Broadway, which will increase the capacity of the plant more than 500 per cent.

John Shelbourne, Hannibal, Mo., has leased the Long Garage on Broadway from Mr. Reidel and has taken possession. He is installing an elevator and will make other improvements to better his service.

The American Tire Jobbers, with four large stores in Oklahoma, Missouri, Arkansas and Ohio, have been appointed distributors for these States for the new White tire, recently put out by the Car Spring Tire Co. of Joplin, Mo.

The W. S. Hathaway Sales Co., Kansas City, Mo., distributor of Saxon and Scripps-Booth automobiles and Day-Elder trucks, has changed the firm name to the Pioneer Motors Co., with W. S. Hathaway, president; H. T. Hathaway, vice-president; C. E. Hathaway, treasurer, and H. C. Page, secretary. The firm is now located in its new fireproof building at 1615 Grand Avenue.

## The Spokane Home of Selden Trucks



*The Rochester Motors Co. is the distributor of Selden trucks in Spokane, Wash. The sales and service station of this company is located at 1012 West Sprague Street*

J. T. Berridge & Son, Atchison, Kan., are remodeling their garage.

The Motor Inn Garage, Baxter Springs, Kan., is being extensively improved. The garage was recently purchased by G. E. Scott, formerly with the Jefferson Highway Garage, and D. H. Showalter.

The Ford Garage, Buffalo, Kan., will move to the room recently vacated by the Buffalo Motor Co., now being remodeled.

Otto Wilcox, Concordia, Kan., has leased the Cook Building for his garage business. He will put in a full line of accessories, tires and tubes.

C. M. Jenkins, Dodge City, Kan., has opened a new machine shop in the building of the Dodge City Auto Top & Painting Co.

Charles A. Morrill, Hutchinson, Kan., is successor to the Hutchinson Exide Service Station.

The Guarantee Battery Co., Oklahoma City, Okla., has been formed with offices and service station at 909 Broadway. The Ever-ready battery will be distributed by this company and it will maintain an adequate repairing and recharging station.

R. P. Harper, Leona, Kan., is the proprietor of a new garage. He has installed up-to-date equipment with which to do car repairing and has the agency for the Avery tractor and the Briscoe car.

J. E. Nicholson, Oskaloosa, Kan., has severed his connections in the garage business with Ed Singer and has opened a garage of his own on the north side of the square.

Low G. Watkins, Wichita, Kan., has leased the building at 211-213 West Douglas Avenue, formerly occupied by the Universal Motor Co., and has taken possession. The building will be used as a garage for storage and repairs, and a big automobile top and paint shop will be established.

H. E. Noble, Alva, Okla., has sold his half interest in the Buick Sales Co. to A. L. Schroeder of Hutchinson, Kan.

John Orr, Brame, Okla., has started the work on his new garage.

A. M. Brown, Chickasha, Okla., has bought out the supply department of the City Garage. He will increase the stock extensively and will take possession soon.

Evert Bruner, Dacoma, Okla., is the successor to C. L. Laughman in the garage business.

E. W. Bance, Tulsa, Okla., previously manager for G. A. Green, will open a shop for automobile trimmings, automobile tops, seat covers, etc.

F. R. Wood, Corsicana, Tex., is remodeling his new quarters, preparatory to opening his new battery station.

John Ansley, Henrietta, Tex., has leased the Miller building and opened a battery station for lighting, starting, ignition and the repair of storage batteries. He will also operate a Willard service station.

The W. D. Booth Auto Co., Springfield, Ill., has opened a new garage at 219-223 East Monroe Street and will be distributor for the Hupmobile in the Sangamon County territory.

G. W. Patton, Moweaqua, Ill., has sold his garage to Thurman Adams. The latter will operate the plant, assisted by his son. Several enlargements are planned by the new owner.

The Clifford Smith Garage, Ft. Atkinson, Wis., has been purchased by Harry R. Knight, Whitewater, Wis., who will conduct the business under the name of Knight's Garage.

The Wagner & Walter Repair Co., 892 College Avenue, Appleton, Wis., has been dissolved. Henry Walter has purchased the interest of Michael Wagner and will continue the business under the name of Walter Auto Repair Co.

The Inland Battery Co., A. R. Brown, president, has erected a new 50 x 125 Willard sales and service building at 1215 Riverside Avenue, Spokane.

R. C. Dahlhjelm has taken on the Stanley steamer agency and established salesrooms at 1724 West Sprague Avenue, Spokane.

The Pacific Distributors Co., recently incorporated by A. J. Buzard and George De-long, has opened retail stores and offices at 515 East Pike Street, Seattle, and 1022 First Avenue, Spokane. A line of accessories is carried and the company has a distributing agency for the I. C. L. lens.

The John Doran Co., representing the Packard line and the Hudson, has moved to a new building at Third Avenue and Wall Street, Spokane. The building will afford 16,730 sq. ft. of floor space.

The Dirks Motor Supply Co., Second Avenue and Lincoln Street, Spokane, will become jobbers of garage necessities after January 1, 1919, and retire from the retail field.

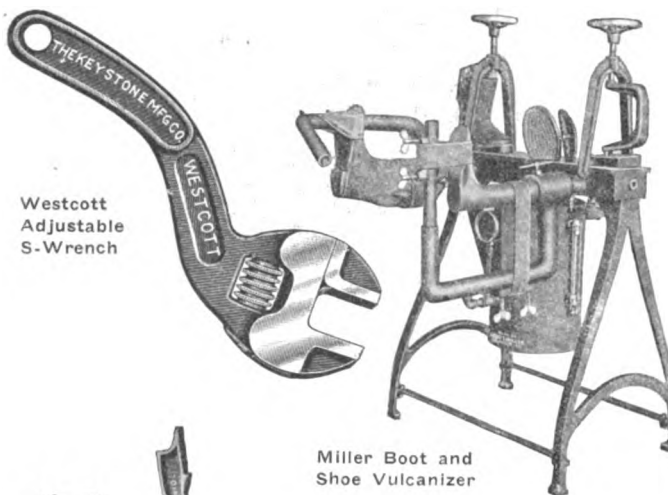
# Automotive Equipment

## WESTCOTT ADJUSTABLE S-WRENCH

This is an S-wrench with a 22½-deg. handle and an adjustable opening. Made in the following sizes and at the indicated prices:

No.	Size	Opening	Price per Doz.
76	6 in.	¾ in.	\$8
78	8 in.	1 in.	10
80	10 in.	1½ in.	12
82	12 in.	1¾ in.	15
84	14 in.	2 in.	21

The handles are made of malleable iron, the jaw being forged steel.—Keystone Mfg. Co., Buffalo, N. Y.



Westcott Adjustable S-Wrench

Miller Boot and Shoe Vulcanizer

## MILLER BOOT AND SHOE VULCANIZER

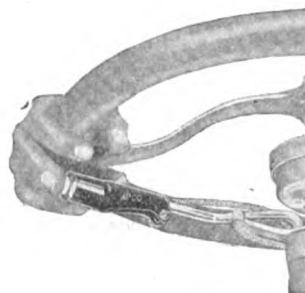
This is a vulcanizer for repairing holes and leaks in rubber boots and shoes. It is practically the same in principle as a tire vulcanizer excepting that the means employed in holding the parts to be repaired in contact with the heated plate are different. Repairs may be made to any part of the boot or shoe. For repairs above the sole, the boot is slid onto the boot mold and the repair strapped to the mold and tightened with the clamp screws. For soling and heeling, the repair is built up, then clamped down to the plate, one of the sole or heel plates being placed between the boot and the plate to give the repair the proper shape. Price \$100 for piping to an existing steam line, \$131 with gas generator, and \$134 with gasoline generator.—Charles E. Miller, Anderson, Ind.

## APCO HANDLE-CONTROL JACK

This is a combination ratchet and screw jack. The control of the up and down motion is entirely in the position of the handle. To raise the jack, the handle is inserted in the jack with the word "up" uppermost. To lower, the word "down" is uppermost. The screw adjustment gives the jack a range of from 9½ to 18½ in. The adjusting ring on the screw is easily gotten at and heavy pawls actually hold the load. Weight 8½ lb. Capacity 3000 lb. Price \$3.—Ashland Products Co., Inc., Ashland, Ohio.



Apco Handle-Control Jack



Apco Horn Button for Fords

## APCO HORN BUTTON FOR FORDS

This is a horn button that fastens to the throttle lever of the Ford. In this position it can be easily reached by the hand as the hand is generally on the throttle when operating the car.—Apco Mfg. Co., Providence, R. I.

## Universal Unit Farm Light and Power Plant

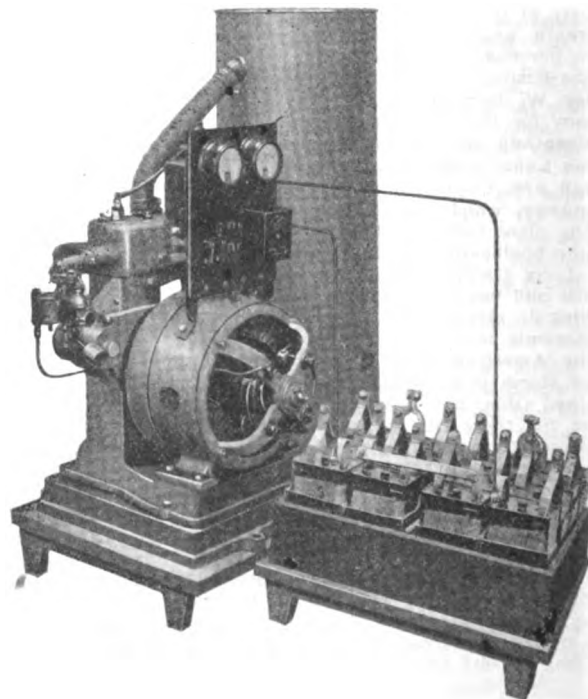
THE Universal Products Co., 543 Broadway, Milwaukee, is making the Universal unit plant for farm light and power. The unit has a normal capacity of 75 lights and the power is supplied by a 1-cylinder gasoline engine which is direct connected to a four-pole generator. The battery is rated at 80 ampere hours.

The engine is of the four-cycle type, cooled by water and with an L-head cylinder, both valves being on the same side, and both mechanically operated. The bore is 2¾ in. and the stroke 3½ in. and the engine is intended to be operated at a speed of 1300 r.p.m. The head of the cylinder is removable and the exhaust valve is fully enclosed. A splash system of lubrication is used. A centrifugal ball-type governor which is enclosed in an oil-tight case controls the speed of the engine according to the load by actuating the throttle.

The four-pole generator is so wound that it is adapted either for continuous battery charging, or it may supply the current direct. The armature shaft revolves on ball bearings. The battery is in 16 cells which are of glass with the plates sealed in. Eight cells are placed on a tray so that the battery can be split for more convenient installation. The batteries are shipped fully charged.

The switchboard is fitted with voltmeter and ammeter, an S & S switch with an automatic cutout to stop the engine when the battery is fully charged and a switch to throw the current on and off the battery. Safety fuses protect the instruments and the generator.

The plant occupies a space of 38 x 30 x 20 in. and weighs 330 lb.



## Tractor Service Spells

# Profit to the Automobile Dealer; Loss and Trouble to the Implement Dealer

*Western Trade Finds That Implement Dealers Are Forced to Ask Higher Purchase Prices for Tractors to Cover Free Service*

ASK the farm implement-tractor dealer in Los Angeles what his service department means and he will say, "trouble and expense." He declares it cannot be conducted on a paying basis.

Talk to Jack Ruddle, of Ruddle & Mennillo, who was trained in the automobile industry and only recently became a tractor dealer, and he will say his firm's books show a profit from the service department.

Therein lies the chief difference between the implement and automobile dealer as tractor merchants. One is content to see his profits devoured by subsequent expense and the other insists upon everything being on a paying basis. The reasonable conclusion as to survival of the fittest points to the inevitable triumph of the man who gets the money.

Until very recently the farm implement-tractor dealer had everything his own way in the tractor field in southern California. The motor passenger car and truck distributors held aloof from the tractor on the theory that it was a farm implement and should be sold by implement dealers. Largely due to the campaign of education that has been waged this sentiment is changing. One of the largest motor car firms in the Southwest is planning to take on a tractor line.

The motor car distributor has seen the farm implement-tractor distributor reach out and grab off motor car sub-dealers as tractor dealers. He has seen his sub-dealers make money out of the tractor business. He has now begun to realize that what the tractor distributor gains by having his sub-dealers act as tractor agents might just as well go on the books of the car distributor who is responsible for the small dealers' existence.

Service is conceded as the paramount issue in the successful distribution of tractors. Ruddle believes in discriminatory service—some that is free but most that is charged for—while the old line implement dealer believes in free service exclusively. Ruddle & Mennillo distribute the Fageol tractor. They are equipping a Fageol truck with a complete machine shop body, and it will go wherever the tractor requiring attention may be, but this service will have to be paid for at the rate of one dollar an hour and the time charged for begins when the service man leaves the store.

Ruddle maintains that if a plumber can begin charging time when he leaves the store, certainly the services of skilled mechanics and a truck should be worth something to the man who is going to benefit from them by having his tractor fixed.

Ruddle says it takes considerably more argument to sell a tractor when his firm's service policy is explained than the implement dealer is put to when he says, "Oh, we'll take care of you on service," but their concern is in business for profits, not welfare.

Los Angeles implement-tractor distributors are giving away thousands of dollars annually in service. They acknowledge the only return they derive is in the "good will" of their users. Alexander McCluskey, sales manager for A. F. George, one of the leading farm implement dealers and distributor for the Yuba tractors, says his concern has been unable to discover any way for making the service department pay for itself. He explains that practically all tractors are sold to distributors by the factory with an extra discount that is supposed to include the probable cost of service.

That system means naturally that the enterprising tractor owner who employs a skilled operator and requires very little or no attention from the dealer is a good investment, while the user who seems unable to learn the first principle about the care of his machine and telephones for help twice a day or oftener was a poor sale. The unfairness of such a system is admitted, but, "What are you going to do about it?" he asks.

A. F. George has five service men in his regular employ and cars are maintained for their use. This firm will send a service man to any point from lower California to the San Luis Obispo County line, pay his wages and traveling expenses and charge it on the books to "service." If the tractor is in such condition that a thorough overhauling is necessary it is shipped to Los Angeles. There it is put in the "yard" to remain indefinitely while work is being done on it. It may be, in the rush season, that the owner will be furnished a demonstrator tractor to continue work with while his machine is undergoing repairs.

Abuse of the service system is admitted. Chief responsibility for so much trouble is placed upon the shoulders of inefficient operators. "The rancher will take pains to learn how to keep his motor

car in operation, but he seems to expect his tractor to work on forever without receiving any attention." Another thing McCluskey explains is the lack of a standard for tractor engineers. The rancher hires a man who says he is an experienced operator and does not learn his mistake until too late.

McCluskey is not much of a booster for tractor schools. He claims that after two or three weeks graduates of the schools obtain employment upon recommendation of the schools, and although they may know something about the mechanics of the tractor they know absolutely nothing about soil conditions and plows.

Another large tractor distributor in Los Angeles maintains six service cars. They respond to the beck and call of owners, and in almost every instance there is no reimbursement for their work. This company unknowingly put out quite a large number of defective tractors. The fault really lay with the factory, but it cost the distributor \$800 to get parts by express to make replacements and another \$1,000 for his service department to make the change-overs. This company sells tractors under a 90 days' free service contract, but does not limit it to this period. If an owner has made but one or two calls for service he can get it free as much as eight months after the date of purchase.

Conditions of service exacted from tractor dealers in southern California, which may be similar elsewhere as well, can be bettered only through a closer understanding between factory, dealer and owner. As long as the buyer feels he is overcharged for the tractor and the difference between the real and market price is to cover free service, he will make unwarranted demands for service. The dealer is in no position to control his service policy under this condition. If the tractor is sold originally at a specified list price and the buyer understands he will be expected to pay for service, he will buy just the same if he has been properly sold on the tractor in the first place.

The situation has become such that prominent distributors in southern California are almost upon the verge of "laying down" and neglecting further development of new business because of the service burden. Now is the time for the automobile distributor to prove the solution.



# Winter Business

Can  
You  
Be a  
NOW-MAN?

## Time—and the Brain God Gave You

### *What Are You Going to Do with Them in 1919?*

**D**ID you ever stop to think that all you have to get along with in this old world are the brain that Providence gave you—and TIME?

Every tool with which you work, your hands, your business, your employees, and all else, are made operative and efficient only because of your brain.

It's your head that counts.

Without the head the hands are nothing.

You therefore have your working machinery — whatever it is—and it's ALL dependent on your brain.

*And the whole thing is limited by TIME.*

When you began 1918 you had twelve of the oddest months through which a business man ever lived. *What did you do with them?*

And now you have before you twelve of the most wonderful months you will ever see. *What are you going to do with them?*

It is the habit of all of us to flip over what we call a new leaf at New Year's time. It's not a bad idea.

But what does it mean?

If we turn the leaf wisely it may mean everything. With most of us it generally doesn't mean much.

Let's talk about turning the leaf wisely.

What is the first essential?

It is to get something done—something we weren't doing before.

What, for instance?

Well, let's say Winter Business.

The wisdom with which we turn this new leaf depends on what we do on the morning of January 2.

If we start the day in the same old way the turning of the leaf doesn't mean much. We must do things in a different way.

Therefore, when you come down to the office the morning of January 2 start out to make January, February and March real, profit months. Ordinarily they might not be your best months.

Determine to make big profits during the coming three months so that you will have the start on a good year.

1—Determine to fill your repairshop with work—at a profit. Prepare a letter—or ask MOTOR WORLD to prepare it for you—and send it to your prospect list or to the list of any group of car owners you prefer, urging them to get their cars fixed up before the spring rush begins.

2—AND—install an accounting system that will let you make some profits and know where you get off. If you have no better system ask MOTOR WORLD about its Simplified System of Accounting, which is making profits for 3000 dealers and garagemen.

3—Begin January 2 to SELL CARS—provided you have any. Some dealers have too many cars in stock. They must not let the supply catch up with the demand. It would be disastrous.

Go hard after your prospect list with letters and personal calls. **TRADE SENSIBLY.**

4—Arrange an accessory display and SELL ACCESSORIES.

5—CLEAN UP YOUR PLACE.

There are FIVE things to do—all for your betterment and for Greater Profits during 1919.

Your brain already tells you these things should be done.

You have the TIME.

The only remaining essential in making the brain and time produce value is ACTION.

If you possess the success-making qualities that win out you will produce ACTION.

And that means that on the morning of January 2 you will START these things.

# Graesam Does It—You Can Do It

## *He Goes Out on the Street and Gets Winter Business*

**T**HE Graesam Auto Body Co., New York City, works a fine plan for getting Winter Business. Graesam doesn't propose to sit idle all winter with his shop doing nothing and many cars in the big city needing repairs.

So he wanders along Broadway or any other old street and "looks 'em over." When he finds one that needs fixing he makes a note of the repairs that are needed and jots down the license number. When he gets back to the office he looks over his license list and finds who owns the car.

Then he writes the owner of the car a letter and tells what the car needs and how easy it will be to fix it.

The letter is a surprise to the car owner. He may not have known his car needed fixing. He may have thought it a bigger job than it is.

Assuredly he is impressed with the fact that Graesam is on the job, because any man must be on the job if he goes around town inspecting people's cars and finding out what ought to be fixed.

What Graesam does can be done with profit by the operator of a shop in any town. It doesn't have to be a big town like New York. It can be done anywhere that cars are parked along the curb.

Just go out and "look 'em over" and then write the owners letters. The names of the owners can be secured from the license list and the list can be secured from any one of a number of list companies in large centers.

Or, if you are an accessory dealer, you can write the owner of the car a letter and tell him how much more he would enjoy his car if he had a foot warmer or some other winter accessory. If you are making a drive on some accessory take this method of bringing yourself to the attention of owners and telling them of the things they may not know they need.

Or, if you are a car dealer, send a man around town to look over cars standing at the curb and write the owners letters, telling them what you will allow them for their old cars in trade in a new model of the line you sell.

There is no necessity for sitting in the office and waiting for business to come. NOW is a time when business must be FORCED. The falling of a few prices and the generally unsettled condition have caused some prospects to hesitate about buying a car. Go out and "drag 'em in." Pick 'em up on the street and "make 'em buy." But whatever you do, MAKE A PROFIT.

DEMOUNTABLE TOPS  
OF ALL TYPES  
VICTORIA ONE MAN  
AND ROADSTER TOPS  
REPAINTING  
WINDSHIELDS  
RE-UPHOLSTERING  
METAL WORK  
BLACKSMITHING  
RADIATORS REPAIRED

### Graesam

BUILDER OF  
AUTOMOBILE BODIES

REMODELING, REPAIRING

258 WEST 69TH STREET

TELEPHONE  
COLUMBUS 7236

NEW YORK December 10, 1918.

Mr. Stanley P. Mc Minn,  
1020 Ocean Avenue,  
Brooklyn, New York.

Dear Sir:

We noticed your Studebaker on Broadway and saw by its condition that you might be interested in knowing that the damaged fender on your car can be restored to the condition it was in prior to the accident.

At the above address we have every facility for doing the best of automobile body-work and assure you that if favored with your order that your car will receive our best attention.

May we have an opportunity of estimating on your work?

Trusting to hear from you, we remain

Very truly yours,

GRAESAM AUTO COMPANY INC.



If you find that some car whose number you take is owned by a farmer, and if you have the agency for a tractor, send him a letter on the tractor question.

Or, if you find an old rattle-trap of a delivery wagon or a truck, and if you are selling a truck or trailer that fits in with this man's needs, write him a letter and try to sell him what you have.

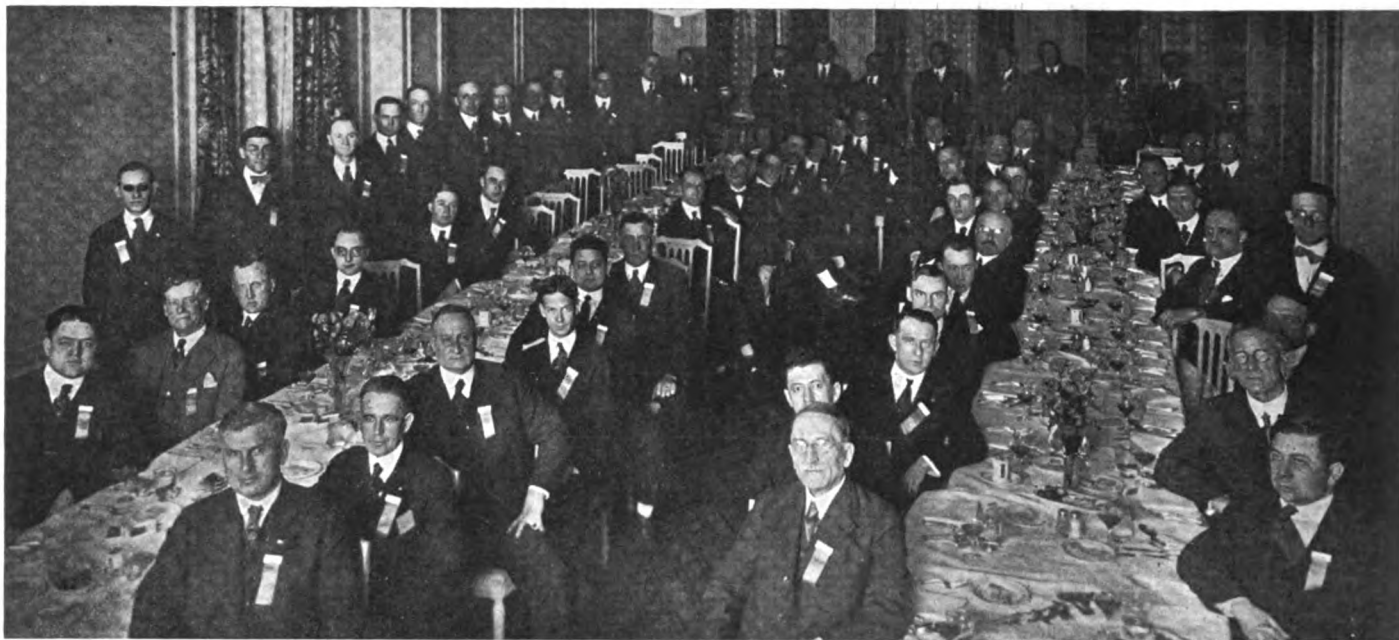
Start off your letter, as does Graesam, by talking about the man to whom you

are writing—NOT about your product, until you get down into the body of the letter.

Better yet, if you have the available organization, make a personal call on the man and don't trust to a letter.

Winter Business is here and you might as well have it now as next spring. Just go after it—that's all.

If Graesam does it YOU can do it.



*More than 150 salesmen and other representatives of the General Tire & Rubber Co. gathered at the Akron factory recently for the annual sales conference of the company*

## *The Peak Load on the Farm*

**This Dealer Bases All His Sales Ammunition on the Labor the Tractor Will Displace**

**A**S nearly as I can figure it out about the same methods and abilities are needed to sell tractors as are employed in the selling of automobiles," says E. B. Miller, the veteran automobile dealer of Warren, Ind.

Veteran automotive dealer is said advisedly, for Mr. Miller has been in business in Warren for thirty years, and says that he has been in the automobile business ever since there was an automobile to sell. Also he intends to engage in the tractor business quite as extensively as he has sold himself on the idea that the tractor is the coming thing on the farm. "And if I have managed to collect more experience than dollars during those thirty years," he continues, "I think nevertheless that that's a pretty good capital with which to go into the tractor business."

Mr. Miller traces his pedigree back to the implement business. In fact, he still sells implements and buggies and harness and a few other things for use on the farm in addition to the Overland car and the Heider tractor.

"I am convinced," he asserts, "that to be successful in selling tractors the dealer must know or learn something about the implement business. He's got to know how to adjust a plow, for instance. Nearly every tractor is used for plowing, in fact around here that's about all the tractor is used for so far, and unless a dealer can make a plow work as well as the tractor he won't get very far."

"My method of making sales is to canvass for prospects. I have a man who

spends his entire time in an automobile covering my territory. He does not confine his attention to any one thing. He goes from farm to farm, notes the conditions and the present equipment the farmer may have and what the latter needs to bring his farm up to efficiency. It may be the farmer lacks a gasoline engine, or an automobile, or a tractor, or something else—practically every farmer needs something, and it is his business to find out what that something is. Then we go after the order.

### **Need for a Service Man**

"The dealer who specializes on automotive equipment for the farm will find it necessary to have a thoroughly competent service man. I keep such a man employed constantly and I send him out whenever there is need for his services. As a matter of experience I find that the farmer himself is the determining factor usually in the amount of service asked for. The young, bright, energetic, adaptable men pick up the operation of a tractor very quickly, and after they are once shown how to operate it manage to attend themselves to most of the troubles they encounter. It's the older men, men who are not so adaptable and who do not seize new ideas as readily, who give the trouble.

"One thing I do believe to be essential and that is a complete stock of repair parts. This I intend to have at all times so that whatever may be needed in the way of spares may be supplied quickly."

Mr. Miller sells tractors without re-

sort to most of the stock arguments advanced for them. In fact, he does not believe in them himself. For instance: He does not believe the tractor can or will displace horses to any great extent. He does not believe that on the average farm a tractor can be operated as economically as are horses. As a tractor dealer he is almost unique in this. Yet he sells tractors.

### **Tractor Carries the Peak Load**

An analysis of his method reveals that the fundamental argument he relies upon is that the tractor not only saves labor, but that it takes the place of farm help. The tractor substitutes for the men whom the farmer cannot hire. It carries the peak load which, without it, would swamp the farmer. It enables him to get his work done and his crops in irrespective of the fact that he has no help. The imperative necessity which confronts the farmer to get his work done on time is the motive which impels him to seek some substitute for man power, and Dealer Miller offers the tractor as the only possible solution of this problem.

And he gets away with it. Maybe that thirty years of experience in talking the labor saving qualities of ordinary farm operative equipment helps a lot. Maybe his many years in interpreting the needs of his farmer customers successfully has inspired confidence in his judgment in the mind of the farmer. But, whatever the real reason may be, he is one of the few dealers who can sell tractors successfully and at the same time practically ignore all of the arguments which commonly are advanced to justify them. Mr. Miller's method is merely an exemplification of the fact that an experienced and clever salesman needs only a condition and an opportunity to make good.

## \$50,000,000 of Lemons and Oranges on Coast

### The Harvest of Citrus Fruits Likely to Set Record—Barometer of Prosperity

LOS ANGELES, Dec. 19—Tractor distributors in this part of the country will share bountifully in the proceeds of the citrus crops now being put on the market. The tractor has proved its utility in connection with citrus orchard cultivation and more and more of these machines are being used in this connection. Some of the manufacturers who curtailed production or else were so far behind in their orders that they have not been keeping up with orders from this section will have to hurry and meet the demands of dealers or their opportunity will be lost. The \$50,000,000 harvest of oranges and lemons began this week and 200 carloads of early fruit were shipped for the holiday trade. These four trainloads of extra fine citrus products will bring the growers about \$250,000.

If a good yield, with the prospect of excellent prices, is any indication of prosperity among the growers, Southern California is on the eve of a great business revival. Hanging in the groves right now is the biggest crop of citrus fruits grown since 1915 and the crop may break all records for sales totals. Field agents and market experts are now making their estimates on the basis of 45,000 cars of citrus fruits for the state, which is regarded as a conservative figure.

The prediction is there will be 18,000 carloads of naval oranges, 2000 carloads of miscellaneous oranges, 15,000 carloads of Valencias and 10,000 carloads of lemons. The naval crop is about 66 per cent of normal production and the Valencia crop from 90 to 100 per cent, figuring the crop from acreage just coming into bearing. The lemon crop is the biggest in the history of lemon growing, due to new acreage and heavy setting.

A big citrus crop and good prices mean the ranchers will buy tractors, trucks and passenger cars in increasing numbers. Following years of successive freezes and burning summers the citrus men have been having a hard time for about three years. Now, however, this will change quickly and these producers will become a valuable asset to motor vehicle dealers at a time when any assistance will be appreciated.

### N. A. D. A. Out to Boost Roads

ST. LOUIS, Dec. 23—The Mid-December issue of the N. A. D. A. bulletin places that organization squarely in line with the good roads promotion movement. The chief topic is a report of the Highway Conference held recently in Chicago, a subject already familiar to readers of Motor World. A foreword by Business Manager Harry G. Moock is headed "An Appeal for Action." He writes:

"What is the most important, the biggest job in the RECONSTRUCTION

PERIOD immediately ahead of us? Right now.

"ROADS, BETTER ROADS, PERMANENT ROADS, TRANSCONTINENTAL ROADS.

"Billions of dollars have been spent for destruction during the war. Billions of dollars will be spent for BETTER ROADS within the next decade.

"What part are you, as an automobile dealer, going to take in this big program?

"Who is there in the entire industry who will question the advisability of BETTER ROADS?

"Then why not RIGHT NOW, individually and collectively, 'Get in the band wagon' and talk, shout, preach and boost BETTER ROADS and help everlastingly keep at it?

"Let us hope that it will not be said, when the big job is complete, that automobile dealers were just followers in the biggest movement (directly beneficial to them) in history, because they were too busy with their own business.

"From the president down to the humblest wage earner, from Government officials, state governors, army officers, manufacturers, farmers and merchants the NECESSITY of better roads, permanent roads, transcontinental roads is conceded. Only the best method has been the question."

### Soldiers Liked Automotive Literature

ST. LOUIS, Dec. 23—W. J. Haughey of the MacFarland Automobile Co., Denver, who has charge of the movement to send gas engine and automotive literature at the various camps where soldiers were trained, recently canvassed the camps to know how this literature was received and if more was needed.

The answers have been sent to Business Manager Moock of the N. A. D. A., at whose suggestion Haughey undertook work. The replies have not been classified, but without exception the camp librarians say that the literature, which consisted of instructive house organs, trade journals and books, was in great demand among the soldiers. A few of them say that more could be used, one or two mention especially motor truck literature being in demand. Persons having such literature can send it to the librarian of nearest open camp or they can communicate with Business Manager Moock of the N. A. D. A. or Mr. Haughey to ascertain where it is most needed.

### Harry Newman Espouses the Truck

ST. LOUIS, Dec. 23—Harry Newman, Inc., will begin production Jan. 15 of a line of trucks in five sizes ranging from 1 to 5 tons. The name of the truck will be announced as soon as the copyright measures now under way are completed. The truck will be assembled here of such standard parts—Timkin-Detroit worm drive axle, Continental Red Seal motor, Stromberg carburetor, etc. The Newman firm last spring entirely dropped passenger cars to give full attention to trucks and trailers.

## Accurate Cost Records Essential for Success

### Philadelphia Trade Hears Just How They Are from a Professor of Accounting

PHILADELPHIA, Dec. 21—"In arriving at accurate costs, it is essential," said Prof. E. P. Moxey, Jr., professor of finance and accounting, University of Pennsylvania, to the members of the Automobile Accessories Business Association, at their meeting last week:

"1—To be familiar with the elements of costs. These are (a) Material; (b) Labor and (c) Overhead.

"2—To keep separate the groupings of costs, which are (a) Selling and (b) Administration. Groupings of costs presumes a distribution of costs over each department of business.

"3—To have cost records definitely controlled by the general books and this control is absolutely necessary for reliable information. Material costs discounts, actually taken, will render cost figures useless.

"4—To realize the necessity for accurate stock records, which are as necessary as the cash book.

"5—To appreciate that personnel is an important factor often overlooked and that you cannot buy brains for \$3 a day. It is well, too, to realize that general books are only as accurate as the accuracy of the stock boy, or stock girl in pricing, or filling requisitions."

In connection with inventory, Professor Moxey showed the advantage of the stock record as capable of being proved and illustrated the methods of valuing stock through average cost and lot prices. Valuation at the inventory period does not affect the stock record, he asserted.

Frank H. Randel, credit manager of the Autocar Co., vividly illustrated how trade acceptances are of decided benefit in the trade. For instance: If a jobber in Philadelphia were selling to a dealer in Richmond the commodity would go to Richmond and, instead of there being an open book account, the trade acceptance would come back, the jobber would bank it, the Philadelphia bank would send it to the Richmond bank on which it was drawn and the money would be available in Philadelphia for the use of the jobber. Also, the dealer in Richmond would have the commodity.

The speaker pointed out that trade acceptances were in general use in Europe and were gaining ground here. Especially in the Middle West, he said, where there is stiff competition with the mail order houses in the accessories line, jobbers and dealers had learned to use the acceptance because it permitted them to do a much larger business on a smaller capital than ever before.

The man, he said, who gave a trade acceptance and then didn't meet it at the bank, was worse off with his bankers than if he had allowed a note to go to protest. The national banking law, he added, permitted the banks to discount

trade acceptances for merchandise up to any amount from one individual, but the law would not allow a national bank to discount more than 10 per cent of its capital stock to any one person.

#### Los Angeles Show Jan. 11-18

LOS ANGELES, Dec. 21—In order to give the committee longer time in which to make preparation, the dates of the Los Angeles automotive exposition announced as Dec. 25-Jan. 1 have been changed to Jan. 11 to 18. The decorative scheme of the committee calls for the use of 3000 ft. of painted scenery to be used as wall hangings and the painters were unable to fill the order in time for the original dates. The Motor Car Dealers' association, which is sponsoring the show, has shown signs of strenuous activity in the effort to stir up interest in motor vehicles. A series of events is being planned for. Following the show there will be hill climbing, economy, endurance and other forms of contests. The general public must be awakened, in the opinion of the association officers, and in order to direct attention to motor cars again the dealers must take the initiative.

#### Wilmington Will Hold a Show

WILMINGTON, DEL., Dec. 23—Wilmington will have its 1919 motor show. This has been definitely decided by the Wilmington Motor Trade Association, notwithstanding the fact that at present there is no available hall that is suitable. At a meeting of the association a few days ago it was learned that the new ballroom of the Hotel duPont will be in such shape late in the spring that it can be occupied, and it was decided to have the show there. Arrangements have been made to confer with the contractor for the building on Jan. 10, with the hope that he can tell them at that time when they can use the hall, but until this information is obtained the date cannot be set.

For the first time in the history of Wilmington shows, commercial vehicles are to be shown if arrangements can be made. Heretofore the space was so limited that it was confined to passenger cars and accessories. At the coming show more space is likely to be available.

#### Little Rock Votes a Show

LITTLE ROCK, Dec. 19—By a unanimous vote the members of the Little Rock Automobile Dealers' Association decided to hold an automotive show next year, probably in April, at Library Hall.

Frank L. Reed, manager of the Paige Company of Arkansas, was appointed chairman of a committee which he will name to make all arrangements for the show.

The date for holding the show will be decided at a meeting of the association to be held Dec. 30 at which F. W. A. Vesper of St. Louis, president of the National Automobile Dealers' Association will make an address.

## M.A.M.A. Sanctions Chicago and Boston

### But No Action Has Been Taken Regarding New York

NEW YORK, Dec. 23—The Motor & Accessory Manufacturers Assn. has formally placed its stamp of approval on two automotive expositions. It has sanctioned both the show which will be put on by the Boston Automobile Dealers' Assn. and the one to be staged by the Chicago Automobile Trade Assn. Nothing has been done as yet in the way of issuing any sanction for the show to be staged in Madison Square Garden and the 69th Regiment Armory by the New York dealers. The annual meeting of the M. A. M. A. will be held at the Congress Hotel, Chicago, Jan. 29.

## WHAT NEWS OF SHOWS?

#### St. Joseph Show March 12-19

ST. JOSEPH, MO., Dec. 21—The sixth annual show of the St. Joseph Motor Car Dealers' Association will be held March 12-19. Last year several trucks and a few tractors were exhibited. This next show, because so many dealers have added trucks or tractors and light plants, the event will have a far wider scope. It will be called the "Automobile, Tractor and Truck Show." Farm equipment to go with tractors will have position.

St. Joseph territory promises to develop a flood of automotive business this next year. Work will start in a few months on the building of brick or other hard-surfaced roads on all the county highways, with the proceeds of a \$2,000,000 bond issue. St. Joseph business men have contributed to a \$600,000 fund raised by subscription for building brick roads in five counties, connecting up a system that leads into the city.

#### Rochester's Show in February

ROCHESTER, Dec. 20—President George W. Henner of the Rochester Auto Trades Association has announced the personnel of the committee which will manage the Automobile Show to be held at Exposition Park Feb. 10-15. The committee consists of the seven directors of the association and eight members appointed by the president.

Those appointed by the president are: Harry G. Strong, Strong Motors (Chan-

ler); Charles T. Chapin, Chapin-Owen Co. (accessories); Henry J. Rowerdink, W. H. Rowerdink & Son (accessories); Campbell A. Baird, Cunningham Co.; Archib Holley, Rochester Haynes Co.; George J. Sullivan, Sullivan Motor Car Co.; Albert M. Zimbrich, A. M. Zimbrich Motor Car Co.; Edward D. Creed, president of the Overland-Rochester Co. At the first executive meeting of the show committee George C. Donahue, secretary of the Automobile Club of Rochester, was selected to manage the show.

#### Disposition of Government Property

WASHINGTON, Dec. 19—Benedict Crowell, Assistant Secretary of War and Director of Munitions, has been asked by the President to assume responsibility for the disposition of all property acquired by the War Department during the war. Crowell appointed C. W. Hare, Assistant Director of Munitions, to supervise this work and Brig.-Gen. C. C. Jamieson has been appointed Director of Sales to perfect an organization for disposing of surplus property.

Airplanes, some trucks, tractors, motorcycles and other commodities will be disposed of through this agency. It is the intention of the Director of Munitions to market the Government property, so as to interfere as little as possible with general business conditions, and Hare will probably appoint committees or confer with committees representing the various industries affected, before placing any of these commodities on the market.

Any information desired by members of the automotive industries with regard to the disposal of Government property and the policies of the Government in this matter can be had by addressing C. W. Hare or Brig.-Gen. Jamieson, Munitions Bldg., Nineteenth and B Streets, Washington, D. C.

#### Government Vehicle Orders

WASHINGTON, Dec. 21—When the armistice was signed there were 200,000 trucks on order for the Army, of which 75,000 have been canceled. There were 40,000 passenger cars on order, of which 21,000 have been canceled, and 65,000 motorcycles, of which 29,000 have been canceled. In all the Motor Vehicle Division of the Quartermaster Department has canceled orders for 170,000 trucks, passenger cars, motorcycles and bicycles.

Up to Nov. 11, 1918, the United States Army had ordered 380,000 vehicles through the Motors Division, including 200,000 trucks, 40,000 passenger cars, 65,000 motorcycles and 65,000 bicycles. On Dec. 1 the total number of these which had been completed, delivered and yet to be delivered, and which had not been canceled was 210,000, of which there were 125,000 trucks, 19,000 passenger cars, 36,000 motorcycles and 30,000 bicycles. Included in these 125,000 trucks were 37,000 AA  $\frac{3}{4}$ -ton trucks, 17,000 A  $1\frac{1}{4}$ -ton trucks, 43,000 B 3-ton trucks and 30,000 TT 4-wheel drive trucks.



## Expect Quick Return to Normal Conditions

**California Trade in Convention  
Sure of Coming Prosperity  
—Few Failures**

LOS ANGELES, Dec. 13—Expressions of optimism over prospects for a quick return to normal working and sales conditions throughout all branches of the motor vehicle industry featured the convention of the California Automobile Trade Association, held at Bakersfield. That the industry will have to face during 1919 more serious problems than any that confronted it during the period of the war was predicted.

The convention was attended by about 100 delegates representing the 2800 members of the organization in the state doing an aggregate business of \$150,000,000 annually. Vice-president R. O. Baldwin presided at the sessions which occupied an entire day. Delegates attending were enthusiastic over the results accomplished by the association and expect the new year will provide the opportunity for further advancement.

H. J. Banta, of San Francisco, reported that during the past year, under war conditions, the like of which never existed before there resulted fewer financial failures among those engaged in the allied motor car businesses than during any year in automobile history and said that to-day the industry is in better condition than ever before.

The association agreed to co-operate with the advertising clubs of California in the effort to enforce truth in advertising. Individual members are to be urged to take care that every precaution be exercised against misleading or misrepresenting statements appearing in public print with their sanction.

### Planning to Call a Halt

BOSTON, Dec. 22—Some of the men doing a garage and rental business in Massachusetts cities and towns have a real grievance, and they are planning to find a remedy in organization against it. For example, while they have invested several thousand dollars in garages and cars they now find that owners of private cars are butting in and evenings and other days take out people for trips at so much per ride. In summer the owners of trucks take parties to shore and country resorts by putting in a few chairs or boards, and they make a good thing from this all the season.

Yet they are all breaking the law, for no one is allowed to drive for hire without a chauffeur's license. And at times boys under 18 do the driving, which is also against the law. But as the men who are trespassing upon the work of the garagemen are neighbors and friends they do not like to take action. So a suggestion has been made that a statewide organization be formed or either the men interested join some one of the

organizations in Massachusetts and request the officials of these bodies to take action, first in the courts and then before the Highway Commission. It would not be possible to have the Highway Commission take action through its inspectors, for it has not enough of them, but that body would co-operate when complaints were made to it.

## All Restrictions Are Off

WASHINGTON, Dec. 20—All restrictions and orders of the War Industries Board and all pledges given to the War Industries Board by industries are canceled, effective Jan. 1, 1919, according to formal announcement made to-day by the Board. This means that all restrictions in the purchase of steel and other commodities and in the manufacture of passenger cars, motor trucks and other automotive products and accessories are completely removed and normal peacetime business can resume with the New Year.

### Chauffeur Employment Bureau for Philadelphia

PHILADELPHIA, Dec. 21—The plan of organizing a central employment bureau or clearing house for reliable chauffeurs and other employees was advanced and considered at the monthly meeting of the Motor Truck Owners' Association of Philadelphia. The association is collecting data on insurance risks on trucks with a view of opposing high insurance rates. It is making a special effort to enlarge its membership to the end that a more solid front may be presented to the insurance companies. H. N. Hayden, vice-president of the association, presided. The speakers were George L. Bailey, supervisor of transportation of the United States Navy; A. A. Ort, transportation officer at the Philadelphia Navy Yard, and Robert M. Black of the Federal Department of Agriculture, bureau of markets. The use of trucks in government work was the topic.

### Firestone Makes Changes

BOSTON, Dec. 22—The Firestone Tire & Rubber Co. has sent C. B. Lindeman and J. E. Mayles from the factory to take charge of the forces in the New England district. Lindeman is to have direct charge of the New England district and Mayles will be the Boston zone manager. J. T. Clinton, who has been in charge of the district for the past two years, has resigned. E. S. Babcox, factory advertising manager for many years, has resigned to accept a position with The Christian Herald, New York.

## N.A.D.A. Opposes All Night-Sunday Opening

**Strongly Against Any Lengthening  
of Present Hours—Sees  
No Reason for It**

ST. LOUIS Dec. 23—The N. A. D. A. is taking a very strong stand in opposition to night and Sunday opening on the part of motor car dealers. In addition to the statement made in the bulletin recently, a resolution advising strongly against extending the business hours will be introduced at the annual meeting. In the meantime, both President Vesper and Business Manager Moock are throwing their weight against the night business at all opportunities.

President Vesper was in Kansas City last week to attend a meeting there. He said that the spirit of the men he met there was just like that he had found in other places since the signing of the armistice—hopeful and determined.

"I especially recall a conversation with two successful dealers," he said. "They began by saying that there was one thing that they had to thank me and the N. A. D. A. for. That was the advice to diagnose their business. To take stock and find out whether it was a well founded, successful business or not. 'We found that ours was not,' they told me, but they added 'It is now.'"

"Both of these men have proven to themselves that long hours in shop and salesroom were expensive, both as to loss of money and loss of morale in their working forces.

"In most places there are some men who cannot be stopped from working at nights. Just as there is among the Ford men in this city. I have heard that one Ford man here says that he is not going to open his shop at night until he has so much work that the day force cannot do it or until he is convinced that his competitors are taking important business from him by keeping open at night. I am confident that this man will find that he will not lose money by keeping closed at night, but that he will find that his business is becoming better thought of, the quality of work will be better and the profit will show for the day service only.

"Every dealer I have talked to who has gone into the accounts as to night shop work tells me the showing is all for the day work only."

### Milwaukee Ford to Start

MILWAUKEE, Dec. 23—The Milwaukee Ford assembling plant will go into operation on April 1, at a daily production of about 200 cars. The Government has returned the plant to the company, the need for the building for a convalescent hospital having passed. The Ford company will move back into the building from its temporary quarters at 495 Broadway on Jan. 1, but will not engage extensively in assembly work until April 1.

## Liberty Car Shows Changes

**Bodies Are Improved, New Coupe  
Added and Refinements  
Made in Chassis**

### OUTSTANDING FEATURES

Prices (war tax not included):

5-pass. Touring Car.....	\$1570
2-pass. Roadster.....	1570
4-pass Speedster type.....	1720
5-pass. Sedan.....	2640
4-pass. Coupe.....	2640
Brougham .....	3000
Landaulet .....	3000

Improved Windshield.

New Coupe.

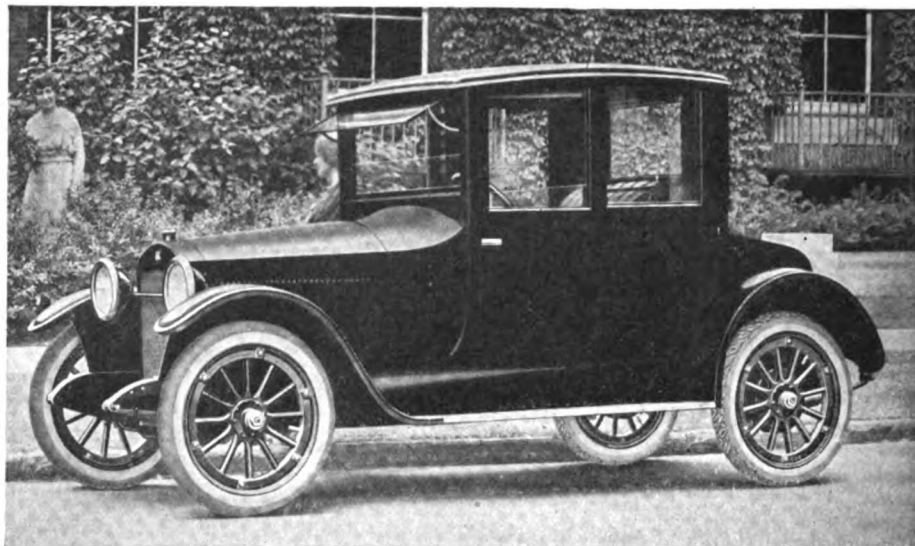
4-pass. Speedster redesigned.

Corrugated steering wheel on all models.

**A**LTHOUGH the chassis remains practically as before, the bodies on the Liberty cars have been altered in many minor details by the Liberty Motor Car Co., Detroit. The louvres in the hood have been doubled in number on all the models and a corrugated walnut rim has been placed on the steering wheel instead of the plain walnut rim which was used previously. To make for freer radiation, the front license tag has been placed below the radiator instead of in front of it.

The touring car and roadster are now fitted with an improved windshield in which the upper glass overlaps the lower one, thus doing away with the rubber strip which formerly closed the aperture between the glasses. On these two models the rear curtain-light rims are now nickel finish.

The 4-pass. body has been entirely redesigned. It was formerly a chummy or close coupled type and this has been changed to give more room and to make a better looking car. The body is of straight-line design with a bevel edge around the top and there is room for 4 persons and space to spare. The square cornered effect at the rear of the car makes it possible to take advantage of



*The Liberty Six Coupe, which is the new body model in the Liberty line. The price is \$2,640 and the capacity is 4 passengers*

every available inch in building the rear seat and yet keep the body within the prescribed limits. The windshield is set at a slight angle. The door handles are nickel plated.

The Sedan is unlike last year's model in that it has four doors and all windows lower into the body of the doors except the rear, which is stationary. The body has been made more roomy and is equipped with a Perfection heater. The rear compartment is upholstered in cloth to suit, the driver's section being in piped leather.

### The New Coupe

The Coupe seats 4 passengers and the driver's seat is just a little forward of the other seat, which, by the way, is 36 in. wide and will accommodate 3 persons. The fourth seat is carried under the cowl when not needed. A dome light provides illumination and a Wilton carpet covers the floor, while the whole interior is finished in gray velour with silk curtains to match with the exception of the driver's seat and the side of the body at his left, which are finished in leather. Luggage room is provided in the rear deck.

## Allen Builds a New Sedan on 41 Chassis

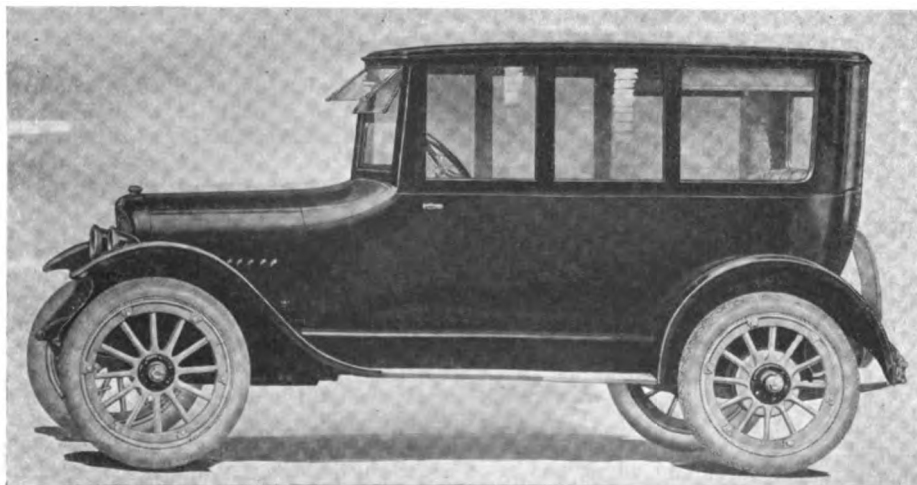
**Single Door Entrance and Staggered  
Seats Features; Finish Blue,  
Black and Cream**

The Allen Motor Co., Fostoria, has brought out a new five-passenger sedan on its 112-in. wheelbase, standard chassis. It has disappearing side windows, staggered doors and a passageway between the front seats and is upholstered in gray and green worsted with a gray top lining and carpet to match. The windows are fitted with silk roller curtains at the rear, and the interior upholstery is over double-decked cushion springs. There is an etched center dome light, robe strap, foot rest and full interior equipment.

The windshield is sloping with full ventilating features, and has an adjustable rain visor. There is a ventilating fixture on the driver's door, and the door is locked by a thumb latch. On the right door there is a Yale lock.

The standard Allen chassis has a four-cylinder 3 $\frac{1}{2}$  x 5 engine, a two-unit Autolite starting and lighting system with Connecticut ignition, Stromberg carburetor, Borg & Beck clutch and a full Hotchkiss drive. Gasoline feed is by Stewart vacuum system from a 13-gal. tank at the rear. Tires are 33 x 4 and the car sells for \$1,795 f.o.b. Fostoria, Ohio.

One of the features of the car is the rotary switch which is mounted on the steering column, directly beneath the steering wheel, controlling the entire electric system, including the starter, ignition, head and tail lamps, dimmers and motor-driven horn. The light for the interior dome light is controlled by a switch within the rear compartment. The finish of the car is Liberty blue for the body and hood, with the top, radiator and fenders black. The wheels are cream color.



*The new Allen 41 Sedan which is now being built on the standard chassis. Entrance is by a single door, and the price is \$1,795*

## U. S. Would Have Had Best Motor Artillery

### Great and Small Tractors and Gun Mounts All Ready When White Flag Went Up

WASHINGTON, Dec. 21—At the time the armistice was signed the War Department was preparing to place under General Pershing the finest motorized artillery equipment that has ever been devised.

Tractors and tanks were being shipped abroad in quantities and we were entering quantity production in American factories. A complete program arranged by the Ordnance Department had been designed and put into action. It included tractors ranging from 2½ to 20 tons, and tanks of various sizes from the 2-Ford to the Mark VIII. The work of designing and getting these tanks and tractors into operation is chiefly that of two automobile men, Lt. Col. H. W. Alden, who designed the tanks, and Lt. Col. W. G. Wall, in charge of tractors and gun mount designs.

The program included the 2½-ton tractor equipped with a Cadillac 8-cylinder engine, capable of hauling the French 75-mm. at 18 m.p.h., the 5-ton tractor equipped with a modified Liberty truck engine capable of hauling a 4.7 howitzer at better than 7 m.p.h. and the 10-ton tractor with a special engine designed by the Ordnance Department, and the 20-ton tractor which is a machine produced by the Holt Co., Peoria.

The tank program included a 2-man tank equipped with 2-Ford engines, a 6-ton tank fashioned after the French Renault and equipped with a Buda engine, and the Mark VIII tank, capable of carrying 12 men, four machine guns and two 6-pounders, weighing 35 tons and equipped with a Liberty engine. In addition a cargo carrier was designed with a truck body and crawl treads.

Production on Nov. 11 of these tractors and tanks had reached a point where the 2½-ton machines were just coming through, and 1858 of the 5-ton, 1541 of the 10-ton and 128 of the 20-ton types had been produced. Of these, 450 5-ton, 643 10-ton, and 81 20-ton types had been delivered in France.

The production on the Ford tanks would have totalled 1250 for the month of December and the Ford plant would have had a production of 2500 a month for Jan. 1.

The 20-ton tank, one of the engineering marvels of the war, was exhibited yesterday at the Aberdine Proving Grounds and Assistant Secretary of War Benedict Crowell drove it over bushes and trees up to 17 in. in diameter and across the stumps.

This particular tank exhibited carried an 8-in. howitzer gun. It weighed 5500 lb. It had made a journey overland from Peoria to Detroit and from Detroit to the Aberdine Proving Grounds at Maryland and included among its feats the climb

of a 45 deg. grade and traveling through 4 ft. of water.

In its journeys overland, whenever a bridge was reached which was considered dangerous, the tank was forded across the river at some shallow point. A demonstration was made which included the firing of the gun with the engine running. The shooting did not disturb the engine, in fact did not even cause a miss, and as quickly as the shell was discharged the tractor was gotten under-way.

The cargo carrier with a truck body and a tractor tread was designed for hauling heavy tonnage. It has all the qualities of the other tractors and is able to climb grades, but of course has not the ability to push down trees.

The Mark VIII tank, which is equipped with a wireless outfit, was produced by the Ordnance Department on a joint production schedule with England, parts being made here and shipped abroad for assembly.

The 2½-ton, 5-ton and 10-ton tractors were manufactured at various automobile plants. A race between these tractors, and including the Ford tank, resulted in a victory for the 2½-ton machine, which easily outdistanced the others at its speed of 18 m.p.h., but the 5-ton job, which includes the modified Liberty truck engine, was said by the officials to be the best artillery tractor that has been produced.

The Ford job is more or less freakish, but nevertheless very effective. The entire tank is less than 6 ft. high and about 10 ft. long. Entrance is made by lifting up the front metal shield through which the gun muzzle appears. The space for the two men is so small that it is necessary to back into it and when the driver and gunner are seated they are huddled in so compactly that there is not even room to sway with the turning and jarring of the tank.

The gunner has his only view by peering through the muzzle of the gun. The driver sees only through the slits in the tower of the machine, and between severe jolts received over the ground and the spasmodic jerks resulting with every turn of the tank, the occupants have a difficult time. The tank operates at 15 m.p.h. and when turning, instead of describing an arc, makes an abrupt right about or left about which makes riding in the tank very difficult and uncomfortable.

#### Springfield Sets Show Dates

SPRINGFIELD, MASS., Dec. 21—Dealers will hold a show in the Municipal Auditorium during the week of Feb. 24. The show committee is composed of Charles R. Culver (Pierce-Arrow), John S. Harrington (Hudson), Frederick Calderwood (Chandler), and Robert M. Sauers (Federal truck).

#### New York Packard Export Office

NEW YORK, Dec. 21—The Packard Motor Car Co. has opened an export office in New York under the supervision of Fred Cardway. The company now has dealers in nineteen foreign countries, including Hawaii, the Philippines and Porto Rico.

## \$23,981,000 in Taxes Paid Out by Makers

### This Is What the 3% on Sales of Cars, Trucks and Motorcycles Amounted To

WASHINGTON, Dec. 20—The total of \$23,981,268.35 collected on the 3 per cent sales tax on automobiles, motorcycles, etc., in the fiscal year ended June 30, 1918, although chiefly derived from Michigan, also included payments of \$3,152,132.17 from Ohio, \$1,890,511.79 from New York, and \$1,236,679.88 from Wisconsin, and lesser but important amounts from many other states as follows:

States and Territories	Automobiles, Motorcycles, Etc., 3 Per Cent
Alabama	
Alaska	
Arizona	
Arkansas	\$24.69
California	165,590.75
Colorado	
Connecticut	190,072.60
Delaware	
District of Columbia	659.25
Florida	
Georgia	2,739.52
Hawaii	
Idaho	
Illinois	709,950.53
Indiana	978,339.23
Iowa	7,913.14
Kansas	1,889.91
Kentucky	26,995.40
Louisiana	6,697.01
Maine	
Maryland	651.24
Massachusetts	134,654.17
Michigan	14,800,679.43
Minnesota	9,815.85
Mississippi	95.00
Missouri	148,071.32
Montana	
Nebraska	748.34
Nevada	178.65
New Hampshire	934.92
New Jersey	18,442.43
New Mexico	
New York	1,890,511.79
North Carolina	7,385.15
North Dakota	
Ohio	3,152,133.17
Oklahoma	7,170.02
Oregon	120.00
Pennsylvania	308,105.80
Rhode Island	44,060.15
South Carolina	8,868.82
South Dakota	
Tennessee	429.80
Texas	116,753.05
Utah	
Vermont	
Virginia	3,571.96
Washington	534.38
West Virginia	
Wisconsin	1,236,679.88
Wyoming	
Total	\$23,981,268.35

The floor tax as filed in the report of the Commissioner of Internal Revenue does not list separately the various industries upon which it was levied, and which includes automobiles, cameras, playing cards, cosmetics, medicinal preparations, sporting goods, etc. The total for all of these preparations is \$3,022,183.36.

#### Postpone S. A. E. Winter Meeting

NEW YORK, Dec. 21—The winter meeting of the Society of Automotive Engineers has been postponed. The new dates are Feb. 4 to 6 instead of Jan. 12 to 14. The Victory Dinner will be held at the Hotel Astor, Feb. 4. The change in dates has been made so that the meetings may be held during the New York automobile show.

## Success in Farm Light Merchandising Calls for Separate Organization

*Dealer Who Handles It as Side Line Doomed to Failure—On the Other Hand, There Is Profit for the Dealer Who Establishes a Separate Organization*

OMAHA, NEB., Dec. 20—"Success in the sale of farm lighting plants will come to the motor car dealer who is big enough to create a separate organization to handle it. The dealer who tries to make a side line of lights or who tries to combine the selling of farm lighting plants with automobiles very likely will make a failure of one or both," says James A. Flynn, manager of the Lalley-Wilson Electric Co., Omaha, Neb.

"The motor car dealer will 'make good' if he gets it out of his head that selling lights is an easy proposition; on the contrary, it is hard work and entirely different from the usual selling of motor cars. It's a mighty easy thing for a dealer to jump into a car and take a joy ride out into the country to demonstrate an automobile, but, you can take it from me, there is no joy riding connected with selling farm lighting plants. Sometimes it means hours of work which frequently run into the night, and should run into the night. For instance, we instruct our men that if they get to talking to a farmer in the afternoon about putting in a lighting plant and the farmer appears to be interested, it is good policy then to make some excuse that there is another man down the road a piece to see and that they will be back after while.

### If the Salesman is Awake

Then along about dark let them come back. If the salesman is on to his job, he has a light installation on the back end of the service truck equipped with the special battery to be used for that purpose, then he slips quietly into the farmer's yard, carries a line of wire into the house, puts up a light or two, starts his engine and shows the farmer right on the spot how much nicer and more convenient the electric light is than the smoky old lamps he had before. I tell you it takes a pretty strong mind to turn a solicitor down after making that sort of a demonstration.

"Speaking about motor car dealers selling electric light plants, perhaps our experience will throw a little light upon the relative value of the motor car dealer as compared with dealers of other kinds. We cover the state of Nebraska, have twenty-six counties in Iowa and the southern part of South Dakota, with eleven men on the road soliciting business. Not very long ago I went over the agency contracts we had and found we had considerably over two hundred dealers in this territory, but many of them were not producing. I called the men in and told them that for the present we would not look for any new dealers but would spend our time eliminating the

dead ones. At the present time we have reduced our agency contracts to one hundred and ninety-five, of which probably seventy-five are producing. It is significant that of these seventy-five who are sending us business right along from 40 to 50 per cent are motor car dealers.

"As indicative of the profit the live dealer can make in the electric light business, let us take a couple of typical instances. One of the live ones who has been in business about two months has sold eleven plants; another has put in eight in about five weeks. When you consider that each installation totals about \$800 and that the dealer makes about \$175 on each installation, it is evident how the man who is really serious and goes about selling lighting plants in the right way can make a lot of money. In addition to this profit, if the dealer himself does the wiring, he can add a charge for his own wages for the time employed in doing the work, thus increasing his gross income materially.

### Some Dealers are Slow

"A good many dealers are a little slow about taking up the sale of lighting plants because they fear that they will have to give a lot of service. As a matter of fact, this is a mistake. In looking over our service cards for the last eight months, we find that 75 per cent of the calls that have been made upon us for service had for their cause some mistake made in the original installation of the plant. This means that the dealer did not follow his instructions.

"The dealer wants to understand that putting in an electric lighting plant on the farm is a permanent installation and it is necessary that it be put in properly. Finding that so many of our dealers had overlooked this fact and made mistakes, we now make it our policy to send a man out to every new dealer we appoint and have him make the first installation to show the dealer how it should be done. After that the dealer rarely has any difficulty.

"We have found, too, that the dealers who go at this business of selling lighting plants in a rational, systematic way open up a field for additional and profitable trade in the line of accessories. The most popular thing to sell following the light installation is a water system, which includes pump, pressure tank, etc. A good many of our dealers make a specialty of electric washing machines; in fact, as soon as there is electricity on the farm, the possibilities for trade on supplementary machines and accessories become numerous. We have not particularly encouraged the building of farm power

houses with central power installation, but instead have encouraged the sale of a portable motor set on a tripod which can be moved from place to place about the house and barn or farm and plugged in on the electric light wires. This motor has a band wheel and furnishes sufficient power to run a grindstone, small drill, power churn, small corn sheller and almost any other small utensil which the farmer may have about his farm which has a place to attach a pulley. The advantage of this is that the farmer does not have to have a special building for his small power machines but can locate them wherever they are most convenient for him and bring the power to them instead of taking the job to the power.

"There is money for the motor car dealer who will go into this business with the idea of making it an independent department and who will give it the attention it deserves. It is not at all difficult to convince the farmer that he ought to have electric light, and once the proper sort of demonstration is made it is almost a cinch to get the order, and one plant sells another. The dealer will find that when he starts in selling lighting plants, it will be well for him to have a truck equipped for giving demonstrations. After he has a few plants installed, he can dispense with the truck, because the most convincing thing, and that which giving satisfaction to which the neighbor has the most power as a selling argument, is a plant properly installed and can be referred."

### Fiat's After-War Policy

NEW YORK, Dec. 19—There has been some speculation as to what would be the post-war program of the Fiat Co., Turin, Italy. It is not the intention of the company to concentrate on a single model; the number of types, however, has been reduced to what is considered to be a minimum. The lowest-priced vehicle will be a light car, a special type of two-seater developed to meet European conditions. For the full touring model the engineers have decided on the 6-cylinder engine in preference to the 8 or 12. It has been decided that all models, from the cheapest to the most expensive, shall be fitted with electric lighting and starting specially designed for that particular chassis. Another mechanical change of interest is the adoption of detachable cylinder heads. The after-the-war models are as follows:

	Model 500	Model 501	Model 502	Model 503
Engine vertical monobloc	4 cyl.	4 cyl.	6 cyl.	6 cyl.
Horsepower	8-12	12-16	25-35	35-45
Weight complete with touring body (lbs.)	1200	1900	3100	3900
Speed with full touring body (miles)	38-40	44-47	50-56	56-63
Wheelbase (in.)	95	105	130	143
Track (in.)	43	49	55	43

Commercial vehicles will form a separate and distinct branch of the Fiat after-the-war production. An agricultural tractor department has already been established and tractors are being supplied to the public.

## Goodyear Loses Suit Over Tire Machines

**Firestones Adjudged Not to Infringe Patent—Some Claims Declared Invalid**

NEW YORK, Dec. 18—Many of the claims of the Goodyear tire machine patent, over which the Goodyear Tire & Rubber Co. started suit against the Firestone Tire & Rubber Co. in 1914, have been declared invalid, and certain other claims alleged to be infringed are held not infringed.

This decision, rendered last week by the United States Circuit Court of Appeals, reverses the opinion of Judge Killets when in May, 1916, he held the patent valid and infringed by Firestone. At that time, and pending final decision, Firestone was placed under a bond of \$225,000.

The decision is an important one inasmuch as it covers what were alleged to be basic patents covering tire making machinery. Immediately following the earlier decision, a very considerable number of companies acknowledged the apparent finality of the opinion and arranged with Goodyear to operate under the patents. These included such well-known makes as United States, Revere, Federal, Fick, Empire, Howe, Kokomo, Mason, General (Akron), Portage and others.

To quote a Goodyear official, the effect of the decision is that Goodyear is "temporarily licked"; it is intimated that the litigation may be carried further. It is possible for the case to be brought before the Supreme Court of the United States on a writ of certiorari.

The patents in suit were one issued to Seiberling and Stevens on June 14, 1904, No. 762,561, and one issued to Seiberling Nov. 30, 1909, No. 941,962, the latter issued upon application made by the state. In the original decision Judge Killets held valid and infringed claims 1, 2 and 14 of the earlier patents and 16 claims of the later patent. Under the new decision claim 1 of the Seiberling-Stevens patent was held not infringed and claims 2 and 4 are held invalid for want of invention; claim 14 "does not differ from the second in any respect now material." Of the state patent claim 4 "and all other claims sued upon (except the 15, 17 and perhaps the 11)" are held invalid.

In the original suit the Goodyear company contended that the Seiberling-Stevens machine was the pioneer and that it paved the way for the modern semi-automatic tire-making machine; that it was the first machine ever produced to make automobile tires, and that while the majority of the tire makers have been building their tires on machines licensed under the Goodyear patents, a few, among them the Firestone Co., refused to concede the validity of the Goodyear patent. The purpose of the machine was to supplant the uncertain and inefficient results of hand work by stretching the fabric layers and uniformly placing them by machine processes.

Pending the appeal all the exhibits were removed to the Federal Court of Cincinnati and the tire machines were set up side by side for the edification of the judges. During the

argument of the case early in 1917 the full bench of judges viewed the manufacture of tire casings as carried on in the Goodyear and Firestone factories.

After the argument, but before the court had rendered its opinion, Firestone discovered new evidence in the form of a Belgian patent of 1906 issued to a Frenchman named Mathern. The utilization of this patent was impracticable before this time because of the European war. The case was reported to consider the Belgian patent and its effect upon the state patent in suit. A replica of the Mathern machine, the original having been purchased by Firestone from Mathern in 1909, was set up before the more modern machines and operated with them before the court.

After holding the case under advisement for more than a year, the Circuit Court of Appeals has now ruled that the Firestone company is free of all charge of infringement.

### Sales Increase in Philadelphia

PHILADELPHIA, Dec. 20—Philadelphia automobile, motor truck and allied trade dealers and manufacturers are highly optimistic over the reconversion of war plans to a peace basis and regular sustained programs of work. Sales in many instances already have advanced rapidly and the real problem appears to be to obtain enough cars to meet the demand. The intention of holding an automobile show in March, at latest, and the movement started by E. J. Berlet to hold a special motor truck show in the near future, indicate the general revival of the go-ahead spirit.

Accessory men and tire dealers, both in specialty shops and department stores, report an impetus the last week.

### Three New Packard District Managers

NEW YORK, Dec. 21—In the reorganization of the Packard Motor Car Co. of New York to meet the demands of peace three new district managers have been appointed. Frederick H. Miller, formerly of the New York City branch, will have charge of the Manhattan, Brooklyn, White Plains and Poughkeepsie districts. David E. Lane, the Newark manager, will be district manager for the New Jersey territory, and John D. Evans of Hartford will have charge of Hartford, New Haven, New London, Springfield and Pittsfield.

### Minneapolis Branch for Bearings Service

MINNEAPOLIS, Dec. 21—The Bearings Service Co. and the United Motors Service, Inc., have opened factory branches in a new building on Tenth Street at the head of Harmon Place, representing respectively the Timken, Hyatt, New Departure and Jaxon Rim companies, and the Delco, Klaxon and Remy companies.

## Billion Dollar Wheat Crop Coming in 1919

**With Only Average Conditions It Is Estimated at \$979,229—  
Best in Years**

NEW YORK, Dec. 21—A billion-dollar wheat crop next year for Kansas and the other three principal states of the winter wheat belt is indicated from present conditions as reported from the statistical department of the Capper Publications. With just average conditions from this time on we can expect an enormous wheat crop in the principal states of the winter wheat belt, of which Kansas is chief, with Missouri, Oklahoma and Nebraska following in the order named. An immense acreage has been planted and conditions have been ideal. The crop usually suffers from one of the three following causes: (1) insects, (2) shortage of moisture in the fall, or (3) winter killing. The last two are in a way related, for very seldom is the crop winter killed when there is sufficient moisture in the soil.

### Ideal Conditions Prevailed

This fall has been favored with most ideal conditions in all of these states and an almost entire absence of Hessian fly, chinch bugs and other insects, which, to do damage next spring would have had to show up in fair volume this fall to have laid eggs in such number as to cause damage next spring. The only discordant note has been from the rapid growth of the plant. There has been some fear that it would "joint" this fall, which would interfere with its development next spring. The recent cool weather has eliminated this danger, however.

The season resembles very closely that of the fall of 1913, which preceded the great crop of 1914, the largest in the winter wheat belt. Many, in making their report, referred to the close similarity between the two seasons.

### Will Bring a Billion

At the government price, which will net our farmers about \$1.97 on the average, it will be seen that there will be poured into this territory next year a total of \$979,229,500—nearly a whole billion of dollars.

It would not be surprising if the yield would show an increase over these figures and the billion dollars be an actuality. This will be twice as much as has ever been realized from any previous crop in the winter wheat belt, and approaches very closely the highest return from all crops for any year prior to the war.

The following table has been compiled from the report:

State	1918. Acreage	Condition	Bu. per acre 1913	Indicated yield based on 1913
Kansas .....	10,800,000	Excellent	20	216,000,000
Missouri .....	4,250,000	"Like 1913"	19	110,250,000
Oklahoma .....	4,100,000	"Best in 10 years"	25	77,900,000
Nebraska .....	3,400,000	"Best in 3 years"	23	78,200,000
Totals .....	22,550,000		22	492,350,000



## Prominent Tradesmen Assume New Duties

### Resignations and Promotions Place Workers in New Places

G. W. Werden has been appointed export manager of the Denby Motor Truck Co., Detroit. He has established headquarters in New York City.

H. W. Clark has been appointed manager of advertising for the Chicago Pneumatic Tool Co., Chicago. He was formerly in the advertising service department of the McGraw-Hill Publishing Co. in Chicago.

Lieut. S. G. Hoffman, president of the S. G. Hoffman Magneto Co., St. Louis, has been mustered out of the aviation service and is back at his plant.

Charles A. Marlen, for a long time superintendent of the Anheuser-Busch Brewery Garage, St. Louis, which cares for more than 100 trucks and cars of many makes, has become vice-president of the H. & H. Machine Co. of that city.

Sergt. Max A. Wiltinsyein, discharged from the Machine Gun Officers' School at Camp Hancock, Ga., has rejoined the Wellington Motor Car Co.'s staff in St. Louis.

Corp. James A. Flamm has returned to his duties as assistant salesmanager for the Weber Implement & Automobile Co. at St. Louis. He was at Camp MacArthur, Tex.

J. M. Smith, for many years superintendent of the Federal Truck Co., at St. Louis, has returned to that job after 8 months' service as assistant to the Chief Inspector of Motor Vehicles in the U. S. service.

William J. Gelsler, formerly with the Republic Motor Truck Co. of Missouri, has been made a special representative of the transportation department of the Dorris Motor Car Co., St. Louis.

Capt. Rozier Wickard of the U. S. aviation service, has rejoined the Kardell Motor Car Co. staff in St. Louis. Capt. Wickard entered the service the month that the United States declared war.

A. N. Rust has resigned as manager for the St. Paul Fisk Rubber Co. branch.

Harrie R. Williams has been made manager of the Electric & Auto Supply Co., a jobbing house in Birmingham, Ala. Williams formerly was with the Gibson Co., Indianapolis, and later with Splittorf in New York.

A. C. Stebbins, president of the Lansing Co. and vice-president of the Capital National Bank of Lansing, Mich., has been appointed general manager of the Auto Body Co. of this city, succeeding H. E. Bradner, who withdrew from active management of the institution on account of ill health. He continues as president of the company.

K. R. Jacoby, who has been assistant to C. A. Earl, first vice-president of the Willys-Overland Co., Toledo, has been elected to a vice-presidency in charge of purchases of the company.

Homer Hilton, formerly representative for the Class Journal Co., has become sales manager of the Oshkosh Motor Truck Mfg. Co., Oshkosh, Wis.

Ralph P. Greene, who has served in an executive capacity for several years with the Motor Car Equipment Co., Boston, has resigned to accept management of the accessory department of the Wetmore Savage Co., Boston, Mass.

C. C. Winningham, formerly advertising manager of the Hudson Motor Car Co., Detroit, has established an advertising agency in Detroit with headquarters in the Book

## Merry Christmas and a Happy New Year

### To All the Readers of Motor World

Building. No one has been named to succeed Mr. Winningham in his former capacity.

T. L. Briggs has been made district manager, covering the Middle West territory for the Rainier Motor Corp. H. J. Ayers will cover New York and New England States.

Captain Ben C. Helm of the Motor Transport Corps has resigned his commission and returned to New York, where he has been appointed general carriage sales manager of the Packard Motor Car Co. of New York.

Edward C. Blake, formerly manager of the Packard White Plains Branch, has been promoted to the management of the New York City branch. W. S. Hagar is the new manager of the Brooklyn branch.

Leroy Eschner, president of the Eschner Motor Co., the St. Paul Automobile Trade Association, and Major, Second Battalion, Minnesota Motor Corps, has resigned to become treasurer and sales manager for the World Tire Corp., Chicago.

L. E. Trent has been elected secretary and general manager for the Common Sense Tractor Co., vice H. W. Adams.

Leo N. Burnett has been released from active service in the Navy and returns to the Cadillac Motor Car Co. to resume charge of the advertising department. John A. Cleary, who was borrowed from the Automobile Sales Corp., Philadelphia, to fill Burnett's post for the duration of the war, has again taken up his duties as sales promotion manager for the Philadelphia concern.

Fred J. Berkley, St. Louis, who has been engaged in the cantonment building service for the government for 18 months, has rejoined the staff of the Packard-Missouri Motor Co. in St. Louis.

Ernest C. Collins, St. Louis, just returned from a tour of the camps in France as a member of the St. Louis vocal quartette, has joined the Cole-St. Louis Auto Co. staff. Cole was formerly a motor car salesman but prior to going abroad for eight months' service as an entertainer had been in the real estate business.

Victor G. Kropf, secretary of the Tri-Cities Automobile Trade Association, composed of passenger car, tractor and truck dealers, and also those who handle accessories in the Illinois cities of Rock and Moline, and Davenport, Iowa, has resigned to become manager of an Omaha commission firm.

P. H. Garber, for many years manager of the Peoria, Ill., branch of the J. I. Case Co., has resigned to take a position as sales manager for the Illinois Silo and Tractor Co., Bloomington, Ill.

Elliott C. Morse, formerly vice-president of the Chalmers Motor Car Co., and the past year in Washington as the general representative of the Willys-Overland Co. in Government contract matters, is leaving Washington to head the export work for the Willys-Overland interests in New York City.

## Uniform Lien Law Is Suggested by N.A.D.A.

### Urges Trade to Work for Passage of Measure—Motor World Model Used

ST. LOUIS, Dec. 16—The first of a series of constructive suggestions from the N. A. D. A. is contained in the current Bulletin, which urges all dealer bodies to get busy at once to obtain a satisfactory lien law in their states. The editorial in the Bulletin gives as a model for such laws a draft prepared by George F. Kaiser, attorney for Motor World. The draft and the suggestions for obtaining such legislation are:

"Lien of Garage Keepers, Automobile Repairmen or Bailee of Motor Vehicles—All persons or corporations engaged in the business of keeping a garage or place for the storage, maintenance or repairing of motor vehicles, and who in connection therewith store, maintain, keep or repair any motor vehicle or furnish gasoline, accessories or other supplies therefor at the request of or with the consent of the owner or his representative, whether such owner be a conditional vendee or a mortgagor in possession or otherwise, have a lien upon such motor vehicle and any part thereof for the sum due for such storing, maintaining, keeping or repairing of such motor vehicles, or for the furnishing of gasoline, accessories or other supplies therefor, and may detain such motor vehicle at any time against such owner or mortgagor until such sum or sums are fully paid.

"Any persons or corporation acquiring a lien under the provisions of this section shall not lose such lien by reason of said motor vehicle or part or parts thereof being removed from the control of the person or the corporation having such lien. The lien of such bailee, garage keeper or repairman shall continue and extend at all times to his right of possession of such motor vehicle or parts thereof against such owner or mortgagor until such sum is paid. In case a motor vehicle or any parts thereof are removed from the possession or control of the person or corporation having such lien, such person or corporation or bailee may, by an action in replevin, retake possession of the same from such owner or mortgagor wherever found, and in such action he shall have the amount and validity of his lien passed upon, determined and enforced."

### How to Start and Finish

When we offer our opinion of the method of procedure, those handling the details may find a more expedient method. So much the better, the N. A. D. A. is concerned more in securing the enactment of the law than the detail.

a. Appoint a legislative committee of prominent dealers with power to act, selecting if possible men who have had legislative experience.

b. Have the committee draw the bill or an amendment invoking the aid of the attorney-general of the State whose office will assist with the technical construction.

c. Committee will then decide upon the legislator most friendly to the industry to present the bill.

d. When the bill is ready for presentation, every dealer in the State should be in possession of the salient features of the intended

law with an urgent appeal that by word of mouth and writing his representative in the legislature be informed that the automotive trade in his district is expecting that his support is being counted on.

e. It would also be very effective to have the dealers and allied tradesmen get up a petition and secure the signature of every voter in their respective district directly or indirectly connected with the industry, presenting it to the committee in charge of legislation of this character.

f. The personnel of the committee of the legislature to which this bill is referred should be made known to the dealers in the State. The dealers' committee should meet with the committee of the legislature. Letters and telegrams should be sent these legislators showing why this legislation is needed.

g. Naturally it will entail considerable effort, time and expense, but unless the trade at once begins to realize that every other industry has had to pass through this same experience in order to secure the legal protection that it is rightfully entitled to, it will continue to suffer through its own lack of initiative.

### Get Busy—Stay Busy

Therefore, it behooves everyone connected with the trade to get busy, stay busy, and see to it that laws are enacted that will afford the necessary protection. Nothing succeeds like success. Legislatures throughout the country are very much the same; once the automobile trade shows its strength and succeeds in placing a law on the State's statutes, the next effort will meet with less resistance.

Early introduction of proposed legislation helps very materially. Quick action is therefore very essential.

The position the N. A. D. A. assumes is not one of just passing interest, but one of a willingness to use its influence, legal advice and assistance in any way within its power that it may be called upon to bring the issue to a successful conclusion.

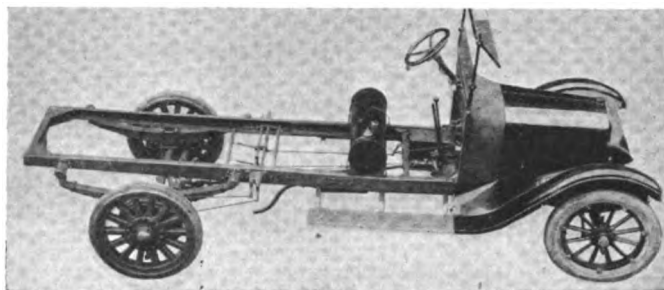
Constant hammering, co-operation and a little unselfish work for and by the trade is the only known method that will bring relief.

If this law is worth having, it's worth fighting for.

The N. A. D. A. stands ready. Are you?

### Henshaw Puts on Nine New Men

BOSTON, Dec. 22—Further evidence that business indications are tending upward is found in the way the Henshaw Motor Co. has started to go after business. During the past week it has put on nine salesmen because the business has increased so much during the past 30 days. Dearborn Bailey, formerly of the Oldsmobile, Oakland and Buick agencies; W. A. Johnson, formerly with the Heinze Electric Co. and later of the Aetna Life Insurance Co.; H. C. Angle, a tire dealer, New Britain, Conn.; G. C. Conant of Bradley Car Works, Worcester; W. C. Bordeaux, Bordeaux Motor Co., Fitchburg; J. J. Costello, Chevrolet Motor Car Co., New Haven, Conn.; J. J. Sheehan, Water Department, Boston; R. A. Gordon and H. C. Henderson, former Boston dealers, are all now with the Henshaw company selling Dodge Brothers cars. Bordeaux and Conant have been assigned to the Worcester office and the others to the main headquarters at Boston.



*The Truxton unit has an internal gear drive axle and will convert any Dodge into a 1½ or a 2½-ton truck*

### Truxton-Dodge Units Make 1½ or 2½-Ton Trucks of Dodge Cars

The Commercial Car Unit Co., Philadelphia, has added two new units to the Truxton line, one to convert a Dodge passenger-car chassis into a 1½-ton truck and the other to a 2½-ton truck. The Dodge chassis is regularly furnished without the rear springs and rear axle for conversion purposes, and the Truxton unit is readily attached with a minimum of labor and waste.

Both the Truxton models are fitted with an internal-gear-drive rear axle, semi-elliptic springs, channel steel frames and artillery-type wheels. The propeller shafts are of tubular construction and have double universal joints.

The frame, which is of heat-treated pressed steel, surrounds and reinforces the Dodge frame and extends to the rear ends of the front springs. The propeller shaft is fitted with a flange which replaces the Dodge universal joint on the gearset. A closing plate is fitted to the rear of the gearset.

When the Dodge chassis is fitted with the Model G, 1½-ton unit, a speed of 20 m.p.h. may be attained, the gear ratio regularly furnished being 6.8:1, although ratios of 7.7:1 and 8.2:1 may also be had at an extra charge. The wheelbase is 136 in., tread 56 in. and tires 34 x 4 in. solid. Pneumatic equipment 36 x 6 is furnished as an extra.

Fitted with the Model H, 2½-ton unit, and regular gear ratio of 7.4:1, the speed is 16 m.p.h. The optional ratios at additional prices are 7.8:1, 8.8:1 and 10.2:1. The tread on this model is a little wider than standard, being 59 in., the wheelbase 148 in. The tire equipment, which is standard, is 34 x 5 in. solid, but dual solid tires 34 x 3½ in. may be had at extra price.

### Perfect Program for N. A. D. A. Meeting

ST. LOUIS, Dec. 23—Business Manager Moock left Saturday for Denver to spend the holiday week with his family. On his return he expects to have available the material for the complete program of the N. A. D. A. annual meeting which will be held in Chicago, Jan. 28 and 29, during the show there.

The program has been outlined but time has not elapsed to have acceptances from the nationally known speakers who

have been invited to address the dealers.

A special meeting is being arranged for local association secretaries and plans of vital importance will be outlined for these men in their work. All secretaries are invited to attend the meeting and are warned that if they do not they will wish that they had.

### Honolulu Member for N. A. D. A.

ST. LOUIS, Dec. 23—The N. A. D. A. had a Christmas gift of an entirely unexpected membership. It came from Honolulu and was signed by the Schuman Carriage and Auto Co. Ltd., per Walter Beals, vice-president. Only a regulation membership application was the document accompanying the check for annual dues. In the line for lines handled was "White, Federal and Republic trucks, Cleveland tractor, Hudson, Franklin, Oakland, Ford and Overland cars. Which would appear to be a rather complete line for one firm.

### Manufacturers Can Make B Truck Parts

WASHINGTON, Dec. 20—Manufacturers of the B 3-ton standardized war truck, also known as the Liberty truck, have been informed by the Motors Division, Quartermaster Department, that they can manufacture and sell the parts of this truck or complete assembly of the chassis for commercial use. There are several important stipulations to the effect that the drawings and workmanship and material as specified by the Government must be adhered to. Gages must be maintained accurately, and the Government must be given the right to purchase these parts if an emergency arises.

### Wisconsin Bought 32,013 Cars This Year

MILWAUKEE, Dec. 23—Wisconsin absorbed 32,013 passenger and commercial cars during 1918, according to the final registration figures for the year given out to-day by A. J. Cobban, head of the motor registry division of the secretary of state's office in Madison. The total number of licenses issued to private owners is 196,844, of which 189,983 were for passenger cars and 6861 for commercial vehicles. In 1917 the combined registry was 164,531.

## Coming Events

### Motor Shows

Los Angeles, Cal.	Jan. 11-18	Automotive Exposition, Motor Car Dealers Assn.
Shreveport, La.	Jan. 16-18	Shreveport Automobile Dealers' Assn.
Milwaukee, Wis.	Jan. 24-30	Eleventh Annual, Automobile Dealers, Inc. Bart J. Ruddle, Manager.
Chicago	Jan. 25-Feb. 1	Cars, Coliseum and Armory, Chicago Auto Trade Assn.
	Feb. 3-6	Trucks, Coliseum, Chicago Auto Trade Assn.
New York	Feb. 1-15	Automobile Dealers' Assn., Charles A. Stewart, Manager (Hotel Woodward, Br'dway & 55th St.)
Fargo, N. D.	Feb. 5-8	North Dakota Automobile Dealers' Assn., Auditorium.
Rochester, N. Y.	Feb. 10-15	Rochester Automobile Trades Assn., Exposition Park. George C. Donahue, Manager.
Cleveland, O.	Feb. 15-22	Cleveland Automobile Dealers' Assn., Wigmore Coliseum. Fred H. Caley, Manager.
Albany, N. Y.	Feb. 15-22	Albany Automobile Dealers' Assn., State Armory.
Louisville, Ky.	Feb. 17-22	Louisville Automobile Dealers' Assn.
Newark, N. J.	Feb. 15-22	N. J. Auto Exhibition Co., Claude Holgate, Manager.
Minneapolis	Feb. 15-22	Northwestern Automotive Exposition, Overland Bldg. Walter R. Wilmot, Manager.
Des Moines, Ia.	Feb. 17-22	Tenth Annual, Des Moines Automobile Dealers' Assn. C. G. Van Vleet, Manager.
So. Bethlehem, Pa.	Feb. 17-24	Cars, Lehigh Valley Auto Shows Co., J. L. Elliott, Manager.
	Feb. 24-27	Trucks, Lehigh Valley Auto Shows Co., J. L. Elliott, Manager.
St. Louis, Mo.	Feb. 24-27	St. Louis Auto Mfrs. & Dealers' Assn., Robert E. Lee, Manager.
Kansas City, Mo.	Feb. 24-Mar. 1	Kansas City Motor Car Dealers' Assn., E. E. Peake, Manager.
Springfield, O.	Feb. 24-Mar. 1	Springfield Automobile Dealers' Assn., Harry W. Stacy, Manager.
Grand Rapids, Mich.	February	Grand Rapids Automobile Business Assn.
Philadelphia	March	Cars, Philadelphia Automobile Trade Assn., A. E. Maltby, Manager.
	Following week	Trucks, Motor Truck Assn.
Detroit	Mar. 1-8	Detroit Automobile Dealers' Assn., Crosstown Garage. H. H. Shuart, Manager.
Buffalo	Mar. 3-8	Buffalo Automobile Dealers' Assn.
San Francisco	Mar. 1-10	Motor Car Dealers' Assn., G. A. Wahlgreen, Manager.
Syracuse	Mar. 10-15	Syracuse Automobile Dealers' Assn., Harry T. Gardner, Manager.
Omaha, Neb.	Mar. 10-15	Fourteenth Annual, Omaha Automobile Trade Assn., Auditorium. Clarke G. Powell, Manager.
St. Joseph, Mo.	Mar. 12-19	Sixth Annual, St. Joseph Automobile Dealers' Assn.
Boston	Mar. 15-22	Boston Automobile Dealers' Assn., Chester I. Campbell, Manager.
Brooklyn	Mar. 22-29	Cars, 23rd Regiment Armory. Brooklyn Motor Vehicle Dealers' Assn., I. C. Kirkham, Manager.
	Apr. 1-5	Trucks, 23rd Regiment Armory. Brooklyn Motor Vehicle Dealers' Assn., I. C. Kirkham, Manager.
Trenton	3rd week Mar.	Trenton Auto Trade Assn., John L. Brock, Manager.
Gt. Falls, Mont.	March	Montana Automobile Distributors' Assn.
Pittsburgh	March	Automobile Dealers' Assn. of Pittsburgh, Motor Square Garden. John J. Bell, Manager.
Bridgeport, Ct.	Not decided	Auspices of City Battalion. R. R. Steibler, Manager.
Hartford, Ct.	Not decided	Hartford Automobile Dealers' Assn.
Wilmington, Del.	Not decided	Wilmington Motor Trade Assn.
Little Rock, Ark.	Probably Apr.	Second Annual, Little Rock Automobile Dealers' Assn. Liberty Hall.

### Tractor Shows

Kansas City, Mo.	Feb. 10-15	Fourth Annual Tractor Show, Union Station Plaza, Kansas City Tractor Club. Guy H. Hall, Sec.
Wichita, Kan.	Feb. 18-22	Annual Mid-west Tractor and Thresher Show, Wichita Tractor and Thresher Club. Forum.

### Meetings

Chicago	Dec. 30-Jan. 1	Twelfth Annual Meeting American Society of Agricultural Engineers. Hotel Sherman. J. W. Dickinson, Secy., Ohio State University, Columbus.
Chicago	Dec. 16, 17, 18	Convention.
Chicago	Dec. 17-18	National Association of Automobile Accessory Jobbers. General sessions.
Chicago	Jan. 28-29	Annual meeting National Automobile Dealers' Association.
Chicago	Jan. 29	Annual Meeting, Motor and Accessory Manufacturers' Assn., Congress Hotel.
New York	Feb. 4-6	Meeting, Society Automotive Engineers.
	Feb. 5	Eastern Division Meeting, National Automobile Dealers' Association.
New York	Feb. 6	Victory Dinner at Hotel Astor.
	Feb. 25-28	Sixteenth Annual Convention American Road Builders' Assn.

### Race

Indianapolis, Ind.	May 30	500-Mile Sweepstakes, Indianapolis Speedway.
--------------------	--------	--

#### TRACTOR SCHOOLS

##### Auspices New York State Food Commission

Saratoga	Jan. 6-10
Newark	Jan. 6-10
Cattaraugus	Jan. 13-17
Trumansburg	Jan. 13-17
Poughkeepsie	Jan. 20-24
Syracuse	Jan. 20-24
Hornell	Jan. 27-31
Waterloo	Jan. 27-31
Middletown	Feb. 3-7
Rochester	Feb. 3-7
Warsaw	Feb. 17-21
Penn Yan	Feb. 17-21
Binghamton	Feb. 24-28

Buffalo	Feb. 24-28
Batavia	Mar. 3-7
Canadagwa	Mar. 3-7
Oneonta	Mar. 10-14
Mt. Morris	Mar. 10-14

#### Avery Service Schools

Madison, Iowa	Jan. 9-11
Des Moines, Iowa	Jan. 13-15
Sioux Falls, S. D.	Jan. 16-18
Aberdeen, S. D.	Jan. 20-22
Minneapolis, Minn.	Jan. 23-25
Fargo, N. D.	Jan. 27-29
Grand Forks, N. D.	Jan. 30-Feb. 1
Billings, Mont.	Feb. 3-5
Peoria, Ill.	Feb. 13-15

## BOOK REVIEWS

**Winter Driving.**—The United Motors Service, Inc., Detroit, Mich. 12 pages, distributed free.

This booklet contains practical hints on winter driving. It was prepared by the technical department, and covers such subjects as starting, control, care of the various components, plug troubles and adjustments, battery suggestions, lighting facts, radiator care and other things having to do with the driving of the motor car in the winter. Dealers can secure copies of this booklet for distribution among their customers.

**Small Tools-Catalog 40.** Small Tool Division Greenfield Tap and Die Corp., Greenfield, Mass. 288 pages. Sent free.

This is the new catalog of the Greenfield line of taps, dies, screw plates, reamers, etc. It measures 4¼ x 7 in. and is well illustrated with the different styles and types of tools and the back section is devoted to useful tables for the mechanic. This catalog is also issued in pocket size for the use of mechanics and jobbers. The other Greenfield lines are taken care of in separate catalogs, the pipe tools being in No. 38, the machine tools in Nos. 39 and 41, and the gages in a catalog which is now in the course of preparation.

**Information.** By Harvey E. Phillips. Auto Electric Systems Publishing Co., Dayton, Ohio. U. P. C. Book Co., distributors, 241 West Thirty-ninth Street, New York. Price, \$2.50.

This is a volume of some 400 pages, containing very elaborate information on elementary electricity, motor car electric systems, the gas engine from an ignition point of view, and driving the car. Mr. Phillips has had extensive experience with the Bell Telephone Co., the Dayton Engineering Laboratories Co., and has been consulting engineer to Aviation Mechanics' Training Schools. He has also published a number of smaller booklets on electrical subjects, especially pertaining to automobile ignition.

In the present book not only are the elementary principles of electricity taken up and thoroughly explained, but the details of the different systems are gone into in detail and there is a considerable amount of information given on driving the car correctly. In the back part of the book there are a considerable number of wiring diagrams of starting, lighting and ignition systems on automobiles up to and including 1917 models.

Indianapolis, Ind.	Feb. 17-19
Columbus, Ohio	Feb. 20-22

#### Case Service Schools

Minneapolis-Sioux Falls-Amarillo	Jan. 7-11
Des Moines-Watertown-Dallas	Jan. 14-17
Crowley	Jan. 21-24
Fargo-Harrisburg-Nashville	Jan. 28-31
Calgary-Syracuse-Louisville	Feb. 4-7
Edmonton-New York-Columbus	Feb. 11-14
Saskatoon-Boston-Indianapolis	Feb. 18-21
Regina-Lansing-Peoria	Feb. 25-28
Winnipeg-Madison-Chicago	Mar. 4-7
Oshkosh	Mar. 11-14

# Farm Tractor

Trade Name	Rating	Weight	Price	Traction Type	No. of Wheels or Crawlers	Engine Make	Cylinder Number	Bore and Stroke	Fuel	Normal Flow Capacity
Acme	12-25	6,000	\$1800	W	2	Beaver	4x16	Gor K	3	3
Acme	12-25	6,800	2250	C	2	Beaver	4x16	Gor K	3	3
Allis-Chalmers	10-18	4,800	1250	W	4	Ow	2x17	Gor K	2	2
All-American	14-20	5,000	1595	W	4	Ow	4x16	Gor K	3	3
American	15-30	4,975	1595	W	4	Beaver	4x16	Gor K	3	3
Andrews	12-20	5,250	1000	W	3	Vernac	4x16	Gor K	2-3	2-3
Appleton	12-20	4,900	1750	W	4	Buda	4x16	G & K	3	3
Atlas	12-20	5,100	1750	W	4	Waukesha	4x16	Gor K	3	3
Autman-Taylor	15-30	7,800	.....	W	4	Waukesha	4x16	G & K	3	3
Autman-Taylor	22-45	12,500	.....	W	4	Waukesha	4x16	G & K	3	3
Autman-Taylor	30-60	23,000	.....	W	4	Waukesha	4x16	G & K	3	3
Austin	5-10	750	.....	W & C	2	LeRoi	4x16	Gor K	1	1
Austin	12-20	3,500	.....	W & C	2	Buffalo	4x16	Gor K	2-3	2-3
Austin	15-30	4,500	.....	W & C	4	Assoc. Mfrs.	4x16	Gor K	4-6	4-6
Austin	20-40	.....	.....	C	2	Automatic	4x16	Gor K	3	3
Auto Tiller	75-125	25,000	.....	C	2	Buffalo	6x17	Gor K	2	2
Avery	8-10	850	365	W	2	Ow	15 x 7	Gor K	2	2
Avery	8-10	2,150	.....	W	4	Ow	13 x 4	G & K	2	2
Avery	8-16	4,900	.....	W	4	Ow	25x16	G & K	2	2
Avery	12-25	7,500	.....	W	4	Ow	26x17	G & K	2	2
Avery	18-36	9,250	.....	W	4	Ow	40x17	G & K	2	2
Avery	25-50	12,500	.....	W	4	Ow	40x17	G & K	2	2
Avery	40-80	22,000	.....	W	4	Ow	47x18	G & K	2	2
Bates Steel Muir	12-20	4,300	1445	C	2	Erd	4x16	G & K	2-4	2-4
Best Tractor Pull	12-20	3,200	1245	C	1	LeRoi	13x16	Gor D	2	2
Best Tractor Pull	15-40	4,500	1600	W	4	Ow	4x16	Gor D	2	2
Best Tractor Pull	30-40	11,000	4100	W & C	2	Ow	4x16	Gor D	2	2
Best Tractor Pull	38-75	28,000	5850	W & C	2	Ow	4x16	Gor D	2	2
Blumberg	9-18	2,450	850	W	4	Ow	4x16	Gor D	2	2
Blumberg	12-24	3,550	1485	W	4	Ow	4x16	Gor K	2	2
Blumberg	15-30	6,900	.....	W	4	Ow	4x16	Gor K	2	2
Boss	20-40	7,600	.....	W	4	Model	4x16	Gor K	2	2
Boss	20-40	7,600	.....	W	4	Field	4x16	Gor K	2	2
Brilliant	12-22	4,000	5500	C	2	Automatic	4x16	Gor K	2	2
Buckeye	14-15	95,000	6500	C	2	Automatic	4x16	Gor K	2	2
Buckeye	16-24	5,000	1075	W	3	Toro	25x17	Gor K	3	3
Bull	12-24	5,000	1075	W	3	Toro	25x17	Gor K	3	3
Case	10-18	3,400	1225	W	4	Ow	4x16	K	2	2
Case	10-20	5,000	1325	W	4	Ow	4x16	K	2	2
Case	15-27	5,600	1400	W	4	Ow	4x16	K	2	2
Case	20-40	13,700	3000	W	4	Ow	28x18	K	2	2
Case	30-60	25,800	3500	W	4	Ow	210x12	K	2	2
Case	30-60	25,800	3500	W	4	Ow	210x12	K	2	2
C.D.	13-25	6,500	1395	W	4	Wiley	4x16	Gor K	2	2
Coleman	16-30	7,000	1750	W	4	Climax	4x16	Gor K	2	2
Creeping Grip	15-25	7,000	2000	C	2	Waukesha	4x16	Gor K	2	2
Dill	20-.....	4,400	2840	W	4	Continental	4x16	G	3	3
E-B	9-18	4,355	.....	W	4	Ow	4x16	K	2	2
E-B	12-20	4,355	.....	W	4	Ow	4x16	K	2	2
E-B	12-20	6,500	.....	W	4	Ow	4x16	K	2	2
E-B	20-35	9,700	.....	W	4	Ow	4x16	K	2	2
E-B	40-65	23,000	.....	W	4	Ow	47x19	K	2	2

ABBREVIATIONS—"W" Wheel, "C" Caster, "D" Drum, "G" Gasoline, "T" Kerosene, "D" Distillate, Flow capacity varies in relation to operating conditions. Figures are based on 14 in. plow.

# Trucks



Name and Model	Type	Capacity	Price	Cylinder and Stroke	TIRES	
					F.	R.
Mack	AC 5	5250	4x50	30x6	40x6d	
Mack	AC 7	5500	4x50	30x7	40x7d	
Mack Tractor	AB 6	3100	4x35	30x4	30x4d	
Mack Tractor	AC 7	4000	4x50	30x5	40x5d	
Mack Tractor	AC 11	5250	4x50	30x7	40x7d	
Mack Tractor	AC 15	5500	4x50	30x7	40x7d	
Manly	30 1 1/2	2050	4x35 1/2	30x4	30x5	
Manly	40 2	2550	4x50 1/2	30x4	30x6	
Manly	50 2 1/2	2800	4x55 1/2	30x4	30x6	
Master	M 2	2390	4x40 1/2	31x4	30x6	
Master	O 2	2490	4x40 1/2	31x4	30x6	
Master	A 3 1/2	3890	4x50 1/2	30x5	40x5d	
Master	W 2	2590	4x40 1/2	30x4	30x6	
Master Tractor	T 0	2650	4x50 1/2	30x4	30x4d	
Master	T 1	1195	4x35 1/2	30x4	30x4	
Maxwell	1	1085	4x34 1/2	32x3	32x4	
Mazda	1	1890	4x35 1/2	30x3 1/2	34x5	
Mazda	H 1 1/2	2475	4x35 1/2	30x3 1/2	34x5	
Mazda	D 2	2590	4x40 1/2	30x4	30x6*	
Mazda	G 3	3380	4x50 1/2	30x6	30x6d	
Mazda	J 6	4950	4x55 1/2	30x6	40x6d	
Mazda	17-N 1	2175	4x35 1/2	34x3 1/2	34x4	
Mazda	17-B 1	2930	4x40 1/2	30x3 1/2	30x5	
Mazda	17-C 1	2775	4x40 1/2	30x4	30x7	
Mazda	17-D 2	3775	4x40 1/2	30x5	30x7	
Mazda	17-E 4	4850	4x50 1/2	30x5	40x5d	
Mazda	17-F 5	5250	4x50 1/2	30x6	40x6d	
Mazda	17-G 6	2325	4x35 1/2	30x4	30x6	
Mazda	20 1	1650	4x35 1/2	30x5	34x4	
Mazda	4017 2	3250	4x50 1/2	30x5	30x5	
Mazda	3018 1	2175	4x35 1/2	34x3 1/2	34x6	
Mazda	Nelson & LaMoen	2000	4x35 1/2	30x3 1/2	34x5	
Mazda	Nelson & LaMoen	2775	4x40 1/2	30x4	30x7	
Mazda	Nelson & LaMoen	3750	4x40 1/2	30x5	30x7	
Mazda	Nelson & LaMoen	4750	4x50 1/2	30x6	40x6d	
Mazda	Nelson & LaMoen	2800	4x40 1/2	30x4	30x6	
Mazda	H 2 1/2	3200	4x50 1/2	30x4	30x7	
Mazda	B 1	1500	4x35 1/2	32x5	32x5	
Mazda	E 2	2400	4x40 1/2	30x4	30x7	
Mazda	NW 2 1/2	2675	4x40 1/2	30x4	30x7	
Mazda	M 1 1/2	995	4x35 1/2	32x4	32x4	
Mazda	Old Reliable	2350	4x45 1/2	34x3 1/2	34x6	
Mazda	Old Reliable	3250	4x50 1/2	34x4	30x4d	
Mazda	Old Reliable	4000	4x55 1/2	34x5	30x6d	
Mazda	Old Reliable	5000	4x60 1/2	30x6	30x6d	
Mazda	Old Reliable	6000	4x65 1/2	30x6	40x6d	
Mazda	Old Reliable	7000	4x70 1/2	30x6	40x7d	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7000	4x70 1/2	30x6	30x6	
Mazda	Old Reliable	2290	4x35 1/2	30x3 1/2	30x5	
Mazda	Old Reliable	2650	4x40 1/2	30x3 1/2	30x6	
Mazda	Old Reliable	3000	4x45 1/2	30x4	30x4d	
Mazda	Old Reliable	3700	4x50 1/2	30x5	30x5d	
Mazda	Old Reliable	4750	4x55 1/2	30x6	40x12	
Mazda	Old Reliable	5250	4x60 1/2	30x6	30x6	
Mazda	Old Reliable	6000	4x65 1/2	30x6	30x6	
Mazda	Old Reliable	7				

## MERCHANDISING SPECIFICATIONS

**T**HE tables which appear on these pages have been prepared with the thought of assisting the salesman in the merchandising of passenger cars and commercial vehicles. The data have been limited to those facts which the average salesman finds necessary for comparative purposes and as sales ammunition.

The tables will be corrected and revised down to date every week.

They will be supplemented by others from week to week, intended solely for the garageman and repairman who has the maintenance of passenger cars and commercial vehicles as his work.

Model	Motor	Ignition	Starting Lighting	WB	Thru	Rims	2.	3.	4.	5.	6.	7.
							Pan.	Pan.	Pan.	Pan.	Pan.	Pan.
ALLEN Series 41	8-3125	Coan	A-Lite	113	32x4	88	.....	\$1186	.....	.....	.....	.....
AMERICAN B	8-3125	A-Kent	Went	123	32x4	88	1835	1765	1805	.....	.....	.....
ANDERSON 20	8-3124	Coan	Wells	130	32x4	88	.....	1675	.....	1750	.....	.....
400-F	8-3125	Booth	Wells	130	32x4	88	19450	.....	.....	.....	.....	.....
APPENDIX 8-13	8-3125	Remy	Bijur	130	32x4	88	17200	.....	.....	.....	.....	.....
AUBURN 8-3125	8-3124	Remy	Remy	130	32x4	88	1506	1806	.....	.....	.....	.....
8-3125	8-3125	Delco	Delco	131	32x4	88	.....	1755	1755	.....	.....	.....
BELL 8-3124	A-Kent	Dynaco	G & D	114	31x4	QD	1145	1145	.....	.....	.....	.....
BIDDLE H	8-3124	Emma	G & D	121	32x4	QD	2700	.....	17750	.....	.....	.....
BERNCOE 8-3124	Coan	A-Lite	A-Lite	104	30x4	C	885	585	.....	.....	.....	.....
BUICK H44-45	8-3124	Delco	Delco	118	32x4	88	1586	1586	.....	.....	.....	.....
H44-45	8-3124	Delco	Delco	118	32x4	88	.....	1586	.....	.....	.....	.....
GADILLAC 8-3124	Delco	Delco	Delco	123	32x4	88	.....	.....	.....	.....	.....	.....
GAGE 8-3124	Wells	Wells	Wells	125	32x4	88	12100	2100	2100	.....	.....	.....
CHALLENGER 8-3124	Remy	Remy	Remy	117	32x4	88	1465	1465	.....	.....	.....	.....
CHANDLER 8-3125	Booth	Booth	Booth	123	32x4	88	12005	2175	2005	.....	.....	.....
CHEVROLET 400	8-3124	Remy	A-Lite	102	30x4	C	715	785	.....	.....	.....	.....
FA 8-3124	Remy	Remy	A-Lite	105	32x4	88	1045	1045	.....	.....	.....	.....
D 8-3124	Remy	Remy	A-Lite	120	32x4	88	.....	1585	.....	.....	.....	.....
COLE 8-3124	Delco	Delco	Delco	127	32x4	88	2565	12565	2565	.....	.....	.....
COLUMBIA 8-3124	A-Kent	W. Land	W. Land	115	32x4	88	11745	1600	.....	.....	.....	.....
CRUICKSHANK 8-3125	Coan	Dynaco	Dynaco	114	32x4	88	1095	1145	1095	.....	.....	.....
DANIELS 8-3125	Wells	Wells	Wells	127	32x4	QDR	3750	3750	3750	.....	.....	.....
DAVIS 8-3124	Delco	Delco	Delco	119	32x4	88	1635	1635	.....	.....	.....	.....
FLYER 8-3124	Delco	Delco	Delco	124	32x4	QD	1400	2000	.....	.....	.....	.....
DIXIE FLYER 8-3125	Coan	Dynaco	Dynaco	112	32x4	88	1095	1095	.....	.....	.....	.....
DODGE BROTHERS 8-3124	Ova	N.E.	N.E.	114	32x4	88	1085	1085	.....	.....	.....	.....
DODGE BROTHERS 8-3124	Booth	Booth	Booth	122	32x4	88	.....	.....	.....	.....	.....	.....
DORRIS 8-3125	Coan	Coan	Coan	105	30x4	QD	1985	985	.....	.....	.....	.....
DORT 8-3125	Delco	Delco	Delco	116	32x4	88	.....	1175	1175	.....	.....	.....
ELCAR 8-3124	A-Kent	Dynaco	Dynaco	116	32x4	88	.....	1375	1375	.....	.....	.....
ELGIN 8-3124	Wagner	Wagner	Wagner	118	32x4	88	.....	1385	.....	.....	.....	.....
EMPIRE 60-61	Coan	A-Lite	A-Lite	115	32x4	88	1165	1125	.....	.....	.....	.....
72	Coan	A-Lite	A-Lite	120	32x4	88	.....	1445	1475	.....	.....	.....
73	.....	.....	.....	.....	.....	.....	.....	11800	.....	.....	.....	.....
ESSEX 8-3125	Delco	Delco	Delco	104	32x4	88	.....	1265	.....	.....	.....	.....
FORD 8-3124	Ova	Ova	Ova	109	30x4	C	500	535	.....	.....	.....	.....
FRANKLIN 8-3124	A-Kent	Dynaco	Dynaco	115	32x4	88	2400	2450	19450	.....	.....	.....

OLDSMOBILE  
45-A  
37  
OLYMPIAN  
OVERLAND  
90  
PACKARD  
3-35  
3-35  
3-35  
PAIGE  
6-39  
6-45  
PATTERSON  
6-46  
PEERLESS  
56  
PIERCE-ARROW  
B-5  
PILOT  
6-45  
PREMIER  
6-C  
REO  
ROAMER  
C-44  
C-44  
D-475  
SAXON  
8-4  
SAYERS  
SIX-43  
SCRIPPER-BOOTH  
DAH  
8-3124  
SIX-39  
STANDARD  
G  
STANLEY  
Swanor  
STEARNS  
SKLA  
8-3125  
STEFENS  
SALIENT SIX  
STUDEBAKER  
SH-4-40  
SH-4-40  
EH-4-50  
E-G-4  
STUTZ  
G  
TEMPLEAR  
A-445  
VELIE  
39  
WESTCOTT  
6-161  
WILLYS-KNIGHT  
8-4  
8-4  
8-3124  
WILLYS  
8-4  
WINTON  
22  
45

GRANT  
G  
HARBORN  
39  
HAYNES  
44  
HOLLIER  
200  
188  
HUDSON  
Super-4  
HUPMOBILE  
E  
JACKSON  
549  
JONES  
37-53  
JORDAN  
KING  
KING  
KRESEL  
100-A  
LEXINGTON  
6-3124  
6-3124  
LIBERTY  
10-3  
LOCOMOBILE  
E-38  
E-38  
LOUIS  
4  
MADISON  
8-3125  
MAIDORIM  
B  
MARION  
M  
MAXWELL  
25  
McFARLAN  
25  
MERCER  
Series 4  
MUTHELL  
D-40  
C-43  
MOLINE-KNIGHT  
G  
MONROE  
M-4  
M-4  
MOON  
6-48  
MURRAY  
NASH  
682  
681-683  
684-685  
NATIONAL  
The  
T-100  
OAKLAND  
84-3

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.  
4.  
5.  
6.  
7.

Model  
Motor  
Ignition  
Starting Lighting  
WB  
Thru  
Rims  
2.  
3.

# The Waltham Automobile Clock

More than a Quarter-Million Now in Use as Standard Equipment

There could be no finer tribute to the Waltham Automobile Clock than is found in the fact that it has been chosen as "time equipment" by the manufacturers of thirty-one leading cars.

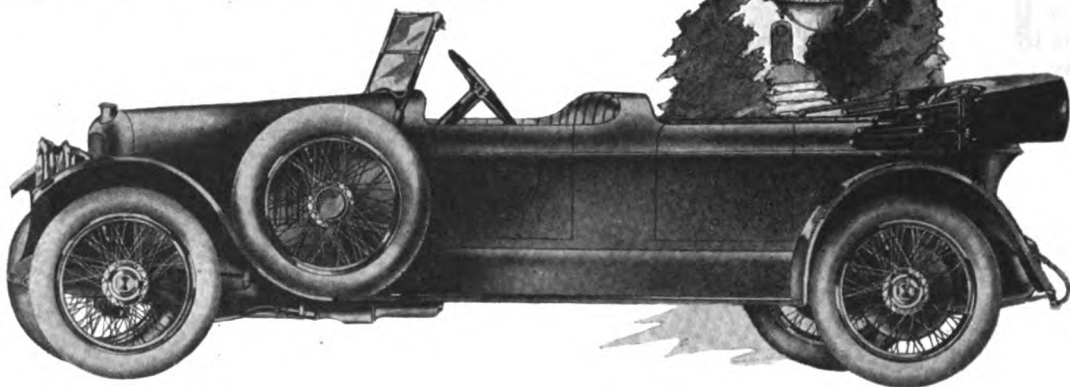
Chosen by them because it has a jeweled movement and two mainsprings; because of the red signal on the dial which flashes a warning that winding is needed once in eight days; because it is the only automobile clock scientifically constructed to keep accurate time under all conditions of roads and climate.

**WALTHAM WATCH COMPANY**  
**WALTHAM, MASS.**

## Cars Equipped with the Waltham Automobile Clock

Anderson 6-40	Fergus	Owen-Magnetic
Apperson	Franklin	Packard
Brewster	Haynes	Pierce-Arrow
Cadillac	Hal	Rauch & Lang
Chalmers	Hudson Super-Six	Rolls-Royce
Cole	Jordan	Simplex
Crane	Kissel	Stearns
Cunningham	Locomobile	Studebaker
Detroit-Electric	Marmon	Willys-Overland
Doble	Mercer	Winton
	Murray	

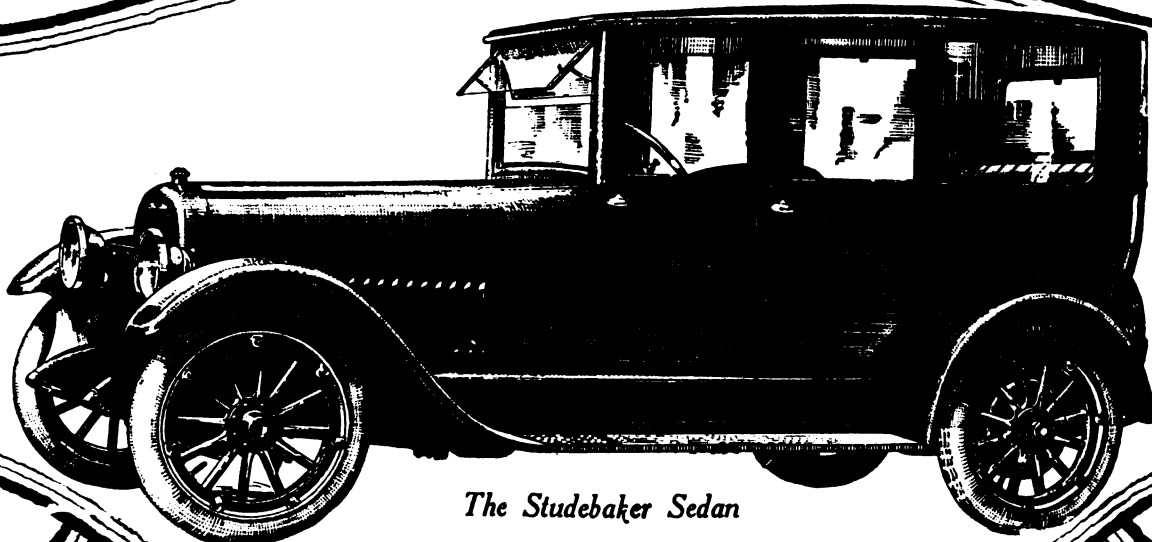
Waltham Model K  
Automobile Clock



Cunningham Car Equipped with Waltham Automobile Clock

# WALTHAM

THE WORLD'S WATCH OVER TIME



*The Studebaker Sedan*

Beautiful in Design  
Thoroughly Modern  
Mechanically Right

**T**HE new Studebaker Sedan, from a point of beauty, is a striking example of the coach-builder's craftsmanship. It has quickly earned a reputation for its artistic lines and splendid appointments. Its handsome upholstery, its rich finish and completeness marks it with distinction in any group of enclosed cars. Nothing that good taste could suggest has been omitted, and the most painstaking care has been given even to the smallest detail.

The LIGHT-FOUR.....\$1125  
The LIGHT-SIX.....\$1585  
The BIG-SIX.....\$1985  
The LIGHT-FOUR Sedan...\$1685  
The LIGHT-SIX Sedan...\$2185  
The Club Roadster.....\$1585

*F.O.B. Detroit*

Mounted on the regular LIGHT-FOUR and LIGHT-SIX chasses, the Studebaker Sedan meets every requirement demanded in a car of this type, including power, stability and exceptionally easy riding qualities.

Dealers are invited to write for open territory.

*Studebaker*

Detroit, Mich.

South Bend, Ind.

Chicago, Ill.

Walkerville, Canada

*Address All Correspondence to South Bend*



# Your Lucky Find A Can OF CLOVER

## Lapping Compound Free

**You're in Luck  
to have seen this ad.**

You don't see an ad like this in every magazine every week. Like finding a four-leaf clover. The fourth leaf of this clover shows a can of grinding and lapping compound. That's where your luck comes in. Any dealer can have a sample for the asking. Simply send us your name and address on your letterhead.



**1600000 Cans Sold Last Year**

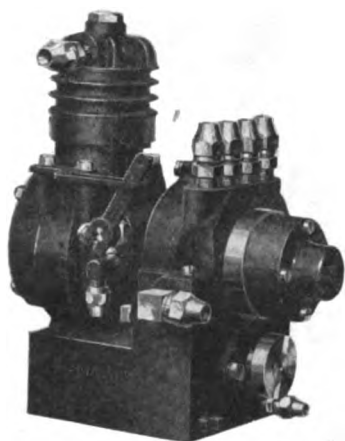
You all know the famous Duplex can of Clover Grinding Compound as many millions have been sold, but do you know that Clover is also made for the shop in 7 grades, from very fine to very coarse. Sold in 1-lb. cans. Remember, it is cheaper to buy in bulk.

New electros for cataloging now ready. Send us your requirements.

**CLOVER MFG. COMPANY, Drawer D Norwalk, Conn.**



# CHRIS



The CHRISTENSEN Starter Unit Is  
No Bigger Than a Magneto



Makes a Plaything  
of the  
Biggest Motor

## Why All Tractors Need Starters

Present low-grade gasoline makes it hard to start any gas engine, even under favorable conditions. Tractors are not kept in heated garages.

Therefore it is important that the early morning start be made quickly without wasting valuable time. It's also important that there be no broken arms or other injuries to the tractor operator.

There is no wasting of fuel or time with starter-equipped tractors. No removing of spark plugs or priming or heating with blow torches necessary.

Every manufacturer, dealer or tractor owner knows these facts to be true and the best evidence of this is the demand on us for definite information regarding Christensen Starter-equipped Tractors. This information is being supplied as fast as we can take care of the numerous inquiries.

**The CHRISTENSEN**

**819 First National Bank Bldg.**

**CHRISTENSEN STARTERS ARE PROTECTED**

# TRACTOR

# TENSEN

★ Carburetion Principle

## Tractor Dealers and Users Have Been Shown

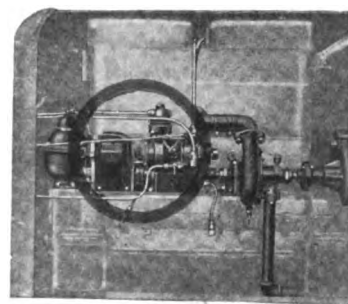
by our tests at the Salina Tractor Show and also by our official records of government tests that the tractor equipped with a Christensen Heavy Duty Starter is far more desirable than any other. Manufacturers of tractors have also sensed the demand for dependable and simple starter equipment. They realize that in a short time starter equipped tractors will be as universal as passenger cars with starter equipment. They are also coming to realize that the Christensen Heavy Duty Starter is the only tractor starter that is simple, certain and not dependent on electricity for its power.

That is why Christensen Tractor Starters have been adopted as standard equipment on certain well known and high grade tractors for 1919.

Tractor manufacturers, dealers and owners and prospective owners should write us for complete information.

**ENGINEERING CO.**  
**MILWAUKEE, WISCONSIN**

BY U. S. AND FOREIGN PATENTS



Typical CHRISTENSEN Installation  
on Heavy Duty Tractor



Makes a Plaything  
of the  
Biggest Motor

# STARTER



# PULLING FOR THE TRACTOR DEALER

FROM now on, tractors that have Bosch Magneto Ignition will be easier to sell.

In addition to the many other mediums in which Bosch advertising is appearing, a special tractor drive is being made in all the papers shown on this page. Notice which papers they are. No need to tell you that they are the biggest, best read papers covering the very heart of the tractor-using territory.

Month after month, farmers who own tractors and farmers who intend to own them, will read, in big space, why they should have

## B O S C H MAGNETO IGNITION

You, who are in the business, know the vital importance of ignition that will "stand the gaff." You know the superiority of Magneto Ignition for severe service; the war has proved that. You know that Bosch with its rip-roaring sparks and its rugged construction is the top-notch magneto.

And now tractor buyers will be made to know all this, too. You won't have to argue ignition if the tractor you sell is Bosch-Equipt. Bosch is a sales feature, a sales help. You can sell Bosch also to users who are having troubles with other ignition systems.

Be Satisfied      Correspondence Invited      Specify Bosch

### BOSCH MAGNETO COMPANY

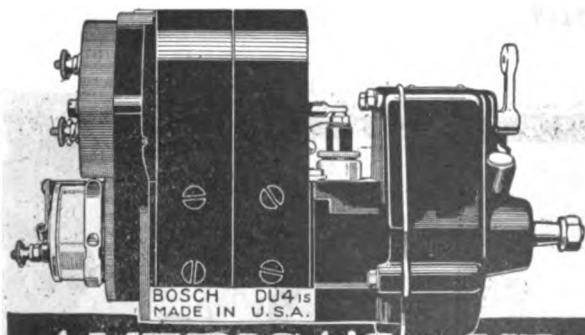
Main Office: 224 W. 46th Street

New York, N.Y.

Branch Offices: Chicago, Detroit, San Francisco.

Works and Foundries: Springfield, Mass.

191 Service Stations; more being added.

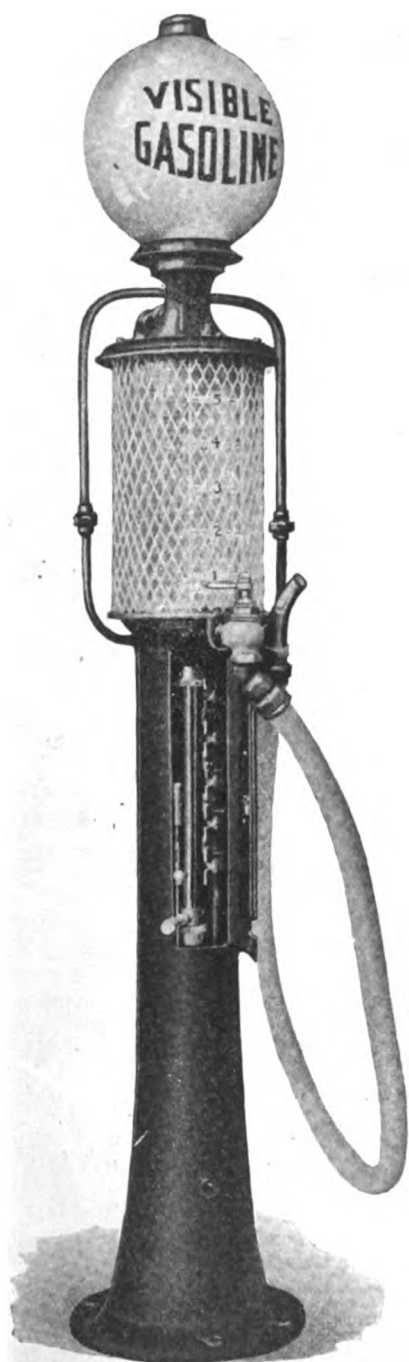


**AMERICA'S SUPREME IGNITION SYSTEM**  
MOTOR TRUCKS - TRACTORS - AIRPLANES - MOTOR CARS - MOTOR BOATS - MOTORCYCLES - GAS ENGINES - ETC.

When writing advertisers please mention Motor World—it identifies you

# We Want Representatives

We particularly desire representation in the following business centers: Denver, Colo.; Dallas, Texas; St. Louis, Mo.; Kansas City; Salt Lake City; Toronto, Canada; Philadelphia, Pa.



The American nation learned the habit of thrift during the war.

In all business it is apparent that the traditional spirit of Missouri—"show me"—is becoming a national trait. This is particularly true in the automobile trade. It will become more difficult every day to sell gasoline to the public from "blind" pumps. Car owners naturally are demanding to see what they pay for.

During the war, when supplies of materials for manufacturing were restricted, we prepared for peace times. Our plant is larger, our capacity doubled. **Guarantee Visible Pumps** are going to replace all "blind" pumps at gas stations and garages. There are hundreds of these fast, accurate measures in service now. They are getting nearly all the business in all communities where they are installed. We are ready to back up this statement and will furnish proofs to established jobbers or manufacturers' agents.

When we have responsible representatives in certain territories not at present covered our national advertising campaign will be a tremendous stimulant to the selling drive to be conducted by our agents, with intensive co-operation from headquarters.

***We are not selling stock—the company is three years old and has abundant funds.***

The purpose of this advertisement is to open correspondence with responsible firms and individuals who have the vision to see something of the wonderful future of gasoline.

## Guarantee Liquid Measure Company

PITTSBURGH

PENNSYLVANIA

**AC Spark Plugs Make Sales and Hold Customers. AC Advertising is Stimulating New and Profitable Trade for You. There is a Rich and Expanding Market That You Can Supply by Concentrating on the AC Line. Act Immediately If You Would Get Your Share of This Tremendous Business.**

Look at the spark plugs you are handling from the other side of the counter.

Are you selling spark plugs that you would buy if you were the customer? Or have you cluttered up your shelves with merchandise of questionable quality?

If you are to enjoy the full measure of success you must sell something more than just spark plugs. You must sell spark plugs that will give unstinted satisfaction in service.

And there's only one spark plug that measures up to such a high and exacting standard. That's the AC, endorsed by the country's leading automotive engineers and used in more makes of automobiles than all other makes combined.

AC Spark Plugs guarantee you the new and repeat business on which you place such a high value. They make good in service every claim you can advance for them. And the mighty legion of AC buyers is constantly growing, for AC sales are being stimulated by a nation-wide advertising campaign.

There are various types of AC Spark Plugs for every make and style of motor. Complete dealer information on request.

Champion Ignition Company, FLINT, *Michigan*  
U. S. Pat. No. 1, 135,727, April 13, 1915, U. S. Pat. No. 1, 216,139, Feb. 13, 1917. Other Patents Pending.



*The Standard Spark Plug of America*



**All these well known manufacturers use AC for standard factory equipment**

Acme Trucks  
Advance-Rumely  
Tractors  
American-  
La France  
Anderson  
Apperson  
Brockway Trucks  
Buffalo Motors  
Buick  
Cadillac  
J. I. Case  
Chalmers  
Chandler  
Chevrolet

Cole  
Continental  
Motors  
Crane-Simplex  
Daniels  
Davis  
Deere Tractors  
Delco-Light  
Diamond T Trucks  
Dodge Bros.  
Dorris  
Dort  
Duesenberg  
Motors  
Federal Trucks

Fulton Trucks  
F-W-D Trucks  
Gabriel Trucks  
Genco Light  
G. M. C. Trucks  
Marmon  
Gramm-Bern-  
stein Trucks  
Hall Trucks  
Hatfield  
Haynes  
Hudson  
Hupmobile  
Jackson  
Jordan

Jumbo Trucks  
Kissel Kar  
La Crosse Tractors  
Liberty  
Locomobile  
Trucks  
Maytag  
McLaughlin  
(Canada)  
Packard  
Menominee  
Trucks  
Midland Trucks  
Moline-Knight  
Moreland Trucks  
Murray

Nash  
National  
Netco Trucks  
Oakland  
Old Reliable  
Trucks  
Oldsmobile  
Oneda Trucks  
Packard  
Paige  
Paterson  
Peerless  
Pierce-Arrow  
Pilot  
Premier

Reo  
Riker Trucks  
Robinson Fire  
Trucks  
Rock Falls  
Rutenber Motors  
Samson Tractors  
Sandow Trucks  
Sanford  
Saxon  
Scripps-Booth  
Seagrave Fire Trucks  
Signal Trucks  
Singer  
Smith Motor Wheel  
Standard Trucks

Stearns-Knight  
Stephens  
Sterling Motors  
Sterling Trucks  
Stewart Trucks  
Stutz  
Titan Trucks  
Tower Trucks  
United States Trucks  
Wallis Tractors  
Waukesha Motors  
Westcott  
White  
Wilcox Trucks  
Wisconsin Motors

When writing advertisers please mention Motor World—it identifies you



# Does Federal Want More Dealers?

**T**HE Federal dealer organization is probably one of the most permanent in existence.

In a large number of localities, Federal dealers are as closely identified with the name Federal as the factory itself.

This has occasionally led prospective dealers to hesitate about writing us in the mistaken belief that there is no more room in the Federal organization.

However, there are still opportunities open with Federal. Sometimes—even if rarely—a change does occur. There are also a few territories where Federal is not adequately represented. These offer an honest-to-goodness opportunity for the man fortunate enough to get a Federal franchise in them.

For this reason, Federal is always pleased to correspond with wide-awake, large caliber dealers who appreciate the Federal idea of selling Federal trucks for what they can do and keeping them sold by showing the user how to get the most service at the least possible cost.

## *Federal Success Built On Federal Dealer Success*

**W**HEN Federal makes a dealer connection, we make it in the belief that it is to be profitable to the dealer as well as to ourselves and we expect to do our full share in making it so.

There is no long trail of "casualties" in the shape of lost money for dealers and diminished prestige for the product in Federal history.

## *The Value of the Federal Franchise*

**T**O appreciate the value of the Federal dealer franchise, begin with the prestige of the truck—not a failure in nine years.

Federal trucks have made good so thoroughly that the name itself signifies the very maximum of haulage service.

Consider next the organization. The company has grown from a \$50,000, one building factory to a several million dollar concern occupying many buildings.

Federal has never had a re-financing, re-organization, or a fundamental change in the management of the company.

In its advertising and sales promotion policy, Federal has always been broad gauged, liberal and—judged by results—unusually successful.

Look at it from any angle you desire—Federal has been consistently steady in its growth—substantially founded—conservatively yet progressively conducted. It offers the sort of connection on which you can absolutely rely.

If you believe in the Federal and the Federal idea of motor truck salesmanship, we will be pleased to hear from you. We would like especially to send you issues of "Federal Traffic news." Mail us the post card. It may be very profitable for you to get in touch with our sales department now.

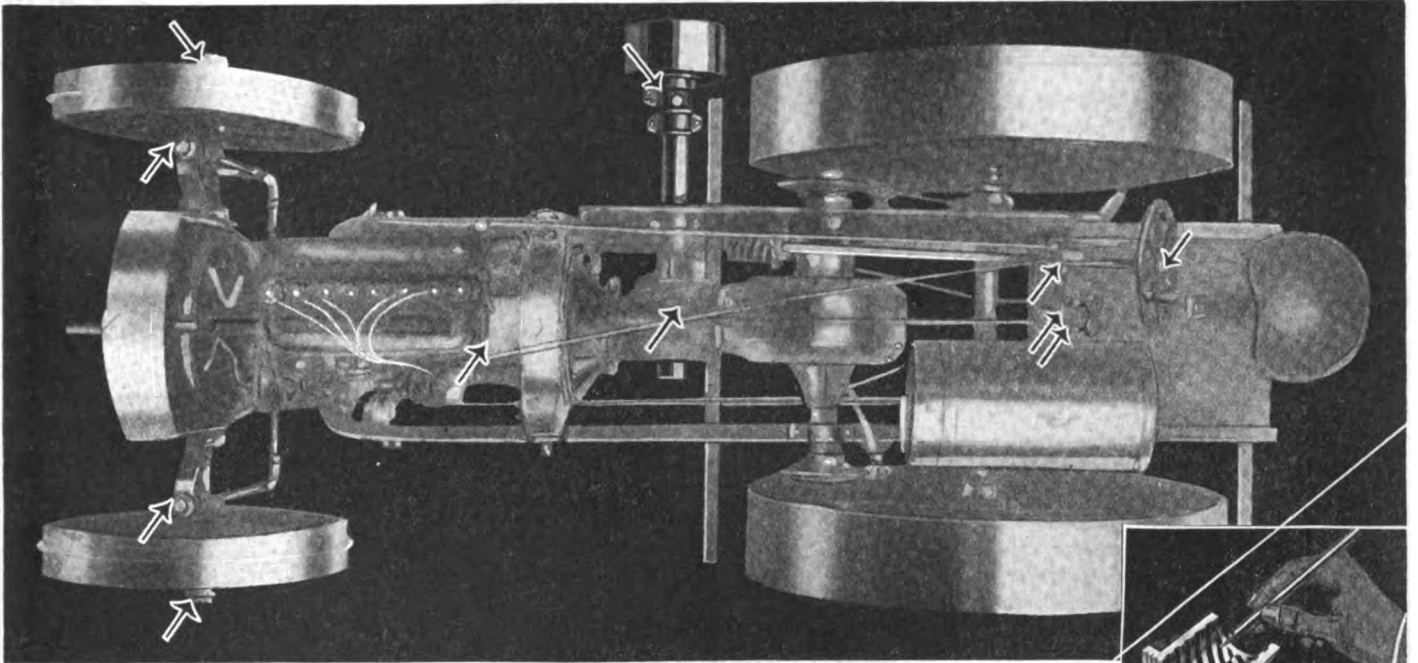
FEDERAL MOTOR TRUCK COMPANY, DETROIT, MICHIGAN

*Another*  
**FEDERAL**

Capacities—One to Five Tons

"Return Loads Will Cut Your Haulage Costs."

When writing advertisers please mention Motor World—it identifies you



# Serviceable Now

*—but how long will it remain that way, if neglected?*

*Many of the tractor's working parts are constantly exposed to dirt, grit, mud, moisture and neglect.*

**N**EGLECT is as inevitable in a tractor as it is in similarly inaccessible parts of motor cars and trucks, and the consequences are bound to be costly unless prevented.

More than 200 manufacturers of trucks and passenger cars are protecting important bearing points by means of Oil-Less Bushings.

And their verdict offers evidence which tractor makers cannot afford to overlook. For Oil-Less Bushings not only keep friction and rust away, even when neglected, but also absorb the grit

and dirt which would otherwise be ground into the shafts and spindles.

No other type of bushing can give such assurance of safety—of freedom from the many troubles that follow in the trail of neglect.

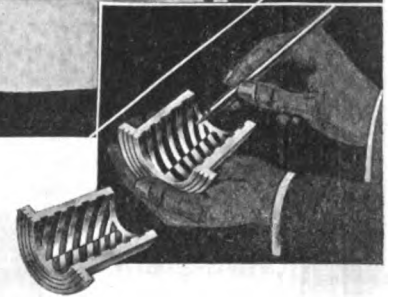
Oil-Less Bushings are made only "to order" for those manufacturers who use them. Our Engineering Department is always at the disposal of manufacturers who care to discuss their bushing problems with us. Catalogue and informative literature upon request.

*All Genuine Graphited Oil-Less Bushings have always been made at Bound Brook, U. S. A.*

**BOUND BROOK OIL-LESS BEARING COMPANY**

*"Specialists in the manufacture of Oil-Less Bushings for more than a third of a century."*

**Bound Brook New Jersey**



*A Bound Brook Bushing is constructed of high grade phosphor-bronze just like any other good bushing. The difference is this: On the bearing surface of a Bound Brook Oil-less Bushing we cast symmetrical grooves or trenches and pack them solid, under hydraulic pressure, with a special fine hard lubricating graphite.*

*The design of the graphite packed grooves varies in different types of bushings according to the service for which the bushing is intended.*

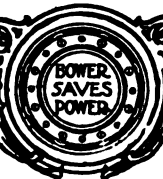
*The graphite and bronze surfaces are flush, they wear down evenly and never require refilling for there is ample lubricating graphite in each bushing to last as long as the bushing itself.*



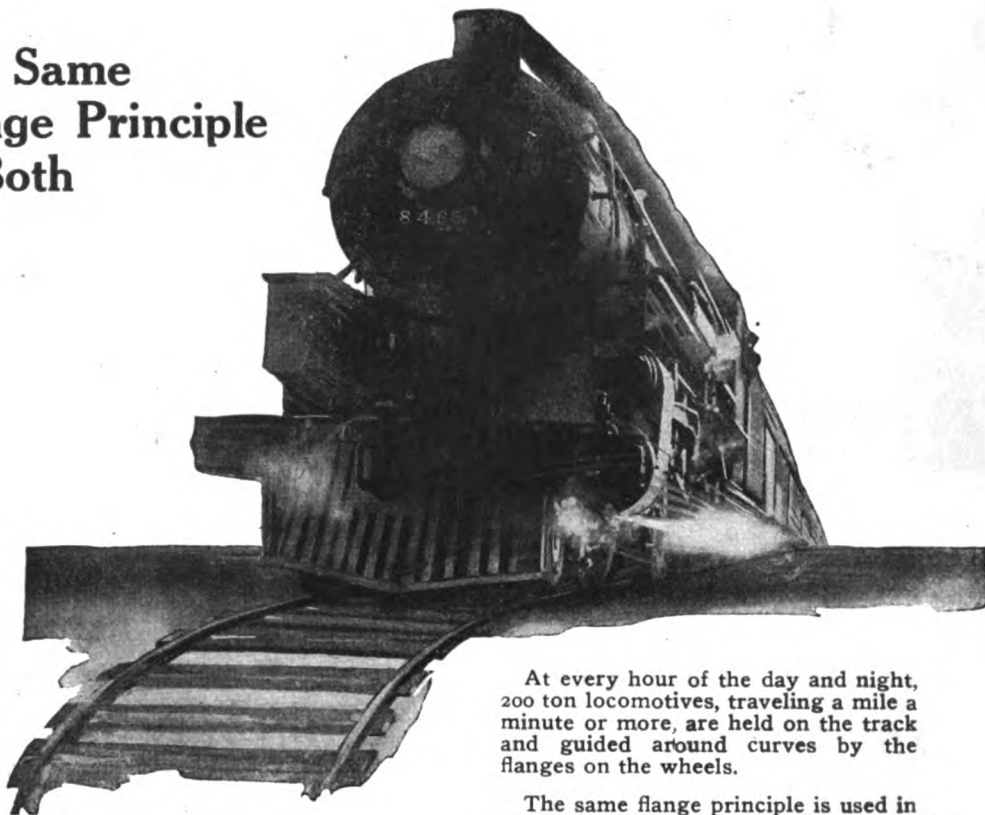
# OIL-LESS BUSHINGS



When writing advertisers please mention Motor World—it identifies you

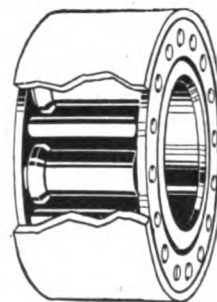


The Same  
Flange Principle  
in Both



At every hour of the day and night, 200 ton locomotives, traveling a mile a minute or more, are held on the track and guided around curves by the flanges on the wheels.

The same flange principle is used in Bower Roller Bearings to guide the rolls and resist end thrust.



**BOWER**  
**ROLLER BEARING CO.**  
**Detroit Michigan**

# Keep the Old Tire in Service

**Y**OU can cover a bad blowout with a PERMA-LOC Blowout Patch—the wonderful new patch made of six layers of tough woven duck fabric impregnated with real rubber—and have a greater feeling of security than any other patch has ever been able to offer.

But why not *guard* against trouble in the first place? As soon as you see a bruise or weak spot in your tire, put a PERMA-LOC patch there—and make it safer and stronger; amply protected against sudden breakdown.

PERMA-LOC is so strong, so tough, so durable—yet without weight or bulk—that it will aid immeasurably in prolonging the life of old and apparently “spent” tires. Extra tire service that you *didn't expect to get* is certainly worth the small price of a PERMA-LOC Blowout Patch. Think of the cost of a NEW tire, in these days of rubber shortage! You'd better see your dealer at once; or if he hasn't got your size, order direct from

**Perma-Loc Mfg. Company, Wilkes-Barre, Penna.**

*Special Prices to the Trade on Quantity Orders.*

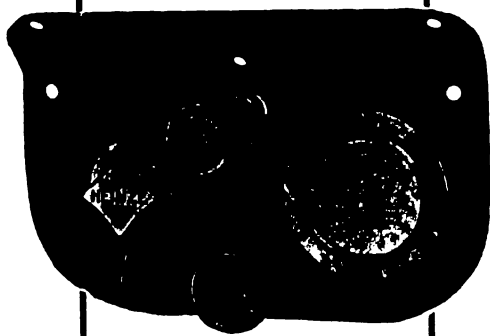
## Perma-Loc BLOWOUT PATCH 6 Ply—Feather Edge

### Where It's Better

- 1—Feather edge of pure red rubber. Protects tube against chafing.
- 2—Moulded and cured to shape—no hard rubber “filler” to give false appearance of strength.
- 3—Six plies of tough, finely woven duck fabric, impregnated with real rubber.
- 4—The Perma-loc trade mark—a positive guarantee of high quality and absolute satisfaction.
- 5—Oversize flaps insure quick, easy fitting—a “man's-sized” grip.



# HEINZE-SPRINGFIELD



## A Real Performance Record

Ford cars are in quantity production.

Dealer's inquiries are increasing, which indicate sales possibilities.

The demand for starters will be greater than ever before and, naturally, the one with a Real Performance Record will have the call.

The merchant with the goods will make the sales. The HEINZE-SPRINGFIELD is staple merchandise.

Profits are satisfactory and the agency in your territory is an asset to your business.

New and attractive printed matter just issued.

Write for information.

**The John O. Heinze Company**  
Springfield, Ohio

## DISTRIBUTORS AND SERVICE STATIONS

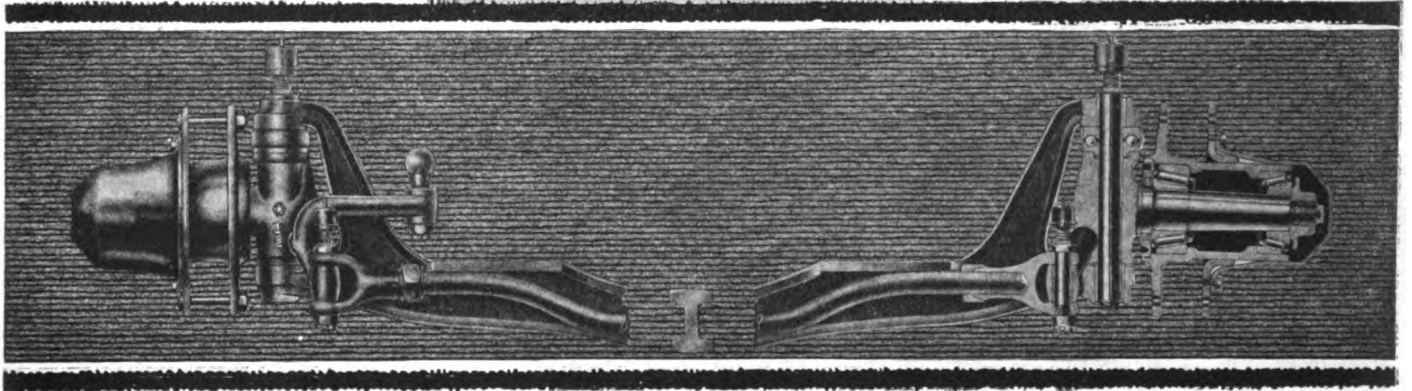
Albany, N. Y.	Autoelectric Equipment & Repair Co.	Los Angeles, Cal.	California Sales Co.
Atlanta, Ga.	David T. Bussey.	Louisville, Ky.	Louisville Auto Supply Co.
Baltimore, Md.	H. F. Parker & Co.	Memphis, Tenn.	McCreery & Phelan.
Birmingham, Ala.	Adamson Motor Co.	Milwaukee, Wis.	WHY Electric Equipment Co.
Boston, Mass.	Boice Motor Equipment Co.	Minneapolis, Minn.	Western Motor Supply Co.
Brooklyn, N. Y.	Mulford-Haas Co., Inc.	Montgomery, Ala.	Patterson & Ingalls Motor Car Co.
Buffalo, N. Y.	United States Rubber Co.	Nashville, Tenn.	Hippodrome Motor Co.
Charlotte, N. C.	A. A. Knee.	New Orleans, La.	Shuler Rubber & Supply Co.
Chehalis, Wash.	Twin City Auto Co.	Oklahoma City, Okla.	J. B. Burwell Supply Co.
Chicago, Ill.	Arthur Jones Electric Co.	Philadelphia, Pa.	Cahall Motor Supply Co.
Cincinnati, Ohio.	L. M. Robbins Company.	Phoenix, Ariz.	Ed Rudolph.
Cleveland, Ohio.	R. C. Hull Supply Co.	Pittsburgh, Pa.	Jackson Motor Supply Co.
Columbus, Ohio.	Reedy-Naddy Auto Supply Co.	Rochester, N. Y.	Chapin-Owen Co., Inc.
Dallas, Texas.	Spencer-Carroll Company.	San Francisco, Cal.	California Sales Co.
Denver, Colo.	Auto Equipment Co.	St. Louis, Mo.	Holthaus Saddl.
Des Moines, Iowa.	Herring Motor Co.	Shreveport, La.	Wray-Dickinson Co.
Detroit, Mich.	Auto Electric Service Co.	Syracuse, N. Y.	United States Rubber Co.
Erie, Pa.	Hilliard & Yokes.	Toledo, Ohio.	Roberts-Toledo Auto Co.
Harrisburg, Pa.	Front-Market Motor Supply Co.	Washington, D. C.	Charles Rubel & Co.
Indianapolis, Ind.	W. J. Holliday Co.	Wichita, Kan.	Price Auto Service Co.
Jacksonville, Fla.	Turner Motor Co.		
Kansas City, Mo.	The Equipment Co.		

### CANADA:

Winnipeg, Man. Joseph St. Mars.

THE "BUILT-IN" CRANKING AND LIGHTING SYSTEM *for Fords*

# SHELDON



## PRECISION MEANS SAFETY

Where "short cuts" mean risk, Sheldon takes the longest way around, rather than accept the doubtful benefits of quicker methods.

It might, for example, be easier—and cheaper—to build a welded steering knuckle. But your truck, its load and its driver are staked against the strength and efficiency of this little part. So Sheldon *drop forges* every steering knuckle in *one piece*, from chrome nickel steel. Then, to

guard against friction and give lasting assurance of absolute safety, it is ground to size within micrometer limits.

This way of doing even the little things naturally makes Sheldon Axles somewhat higher in price than the average. But you don't mind paying a little more to start with, when you get such everlastingly economical service as every Sheldon-equipped truck is sure to give.

**SHELDON AXLE & SPRING CO.,** Makers of axles and springs for heavy duty service for more than 50 years **Wilkes-Barre, Pa.**

When writing advertisers please mention Motor World—it identifies you

Digitized by Google



**Quality—  
Deliveries—  
—and also this**

—that intangible ability to appreciate your side of the proposition—to work side by side with you in studying your individual radiator problems and helping you to Solve them. This is the big reason why your 1919 cars should have Harrison Radiators.

RADIATORS  
FOR  
AIRPLANES  
AUTOMOBILES  
TRUCKS AND  
TRACTORS

HARRISON  
RADIATOR  
CORPORATION  
LOCKPORT,  
N. Y., U. S. A.

# HARRISON

RADIATORS FOR  
AIRPLANES, AUTOMOBILES, TRUCKS AND TRACTORS

When writing advertisers please mention Motor World—it identifies you

Digitized by Google

Cut Down Your Delivery Cost

The **AF-FORD-ABLE** WAY

Convert Your Ford  
Into a Money Maker

**\$185**

Gives You a  
**GUARANTEED**  
One Ton  
Truck

F. O. B. OMAHA, NEB.

The Af-Ford-Able can be attached to any Ford chassis in less than two hours' time. Complete set of directions accompany each unit. There are no holes to bore—simply putting on bolts and nuts. Each Af-Ford-Able attachment is completely tested before leaving the factory and fits the standard Ford chassis to the letter.

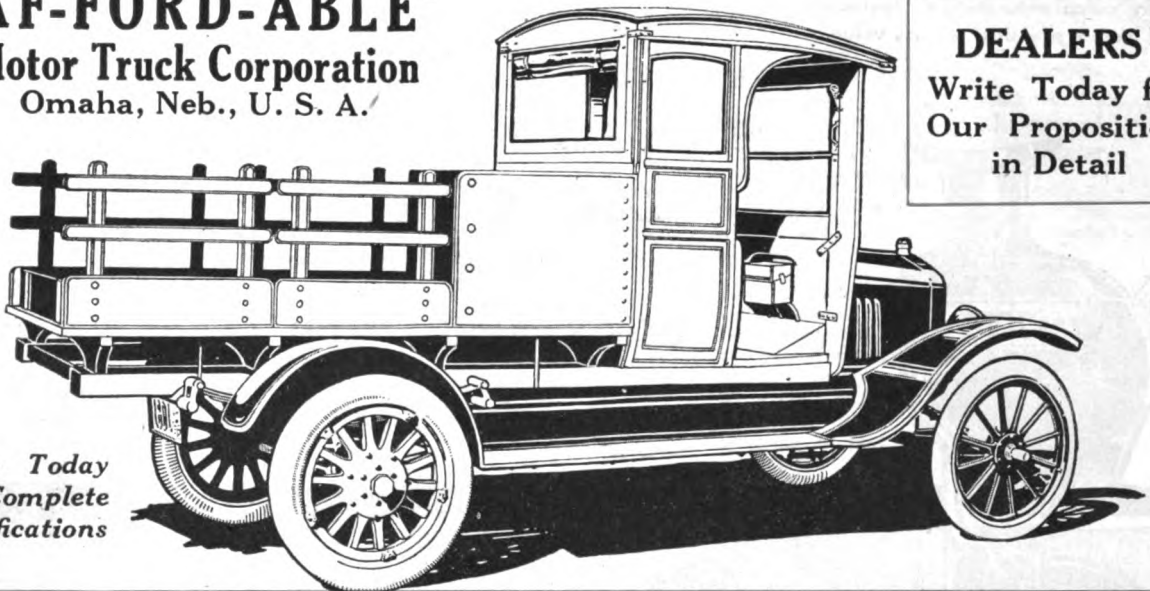
The extra bracing on the rear axle together with the extra set of large ball bearings which are fitted into the Af-Ford-Able hub and revolve outside the Ford axle housing completely eliminates all binding and strain and gives a full floating rear axle.

The Af-Ford-Able is made of the finest materials the market affords and a factory guarantee is given with each attachment for a period of one year for a capacity up to one-ton. Speed together with service is what you get in the Af-Ford-Able Truck.

**AF-FORD-ABLE**  
Motor Truck Corporation  
Omaha, Neb., U. S. A.

**DEALERS:**  
Write Today for  
Our Proposition  
in Detail

Write Today  
for Complete  
Specifications



CUT DOWN YOUR DELIVERY COST

The **AF-FORD-ABLE** WAY

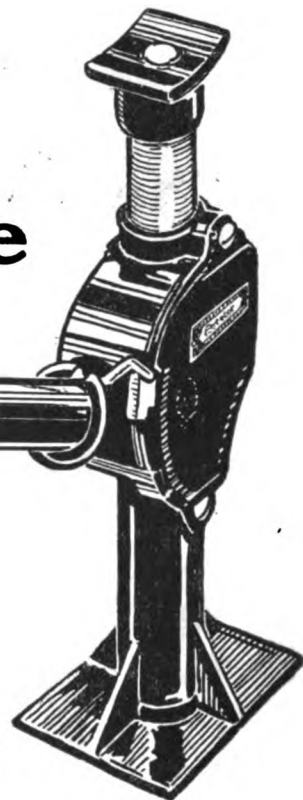
When writing advertisers please mention Motor World—it identifies you



# No Jack Ever Built Has As Many Selling Points As The



## Peteler AUTO JACK



It is a pleasure to sell Peteler Auto Jacks—it is a paying proposition as well and for the same reason.

No jack made has so many selling points as the Peteler—not obscure, far fetched selling points either—but salient features of design that really mean something to motorists and have a practical service value.

The Peteler Auto Jack has a short, easy stroke—an extension handle which permits operation without stooping or reaching under the car—it has an ingenious reversing feature which is a great trouble-saver—splendid proportions, a fine, attractive finish and a wide solid base.

Its 3,000 lbs. lifting capacity makes it available for 95% of the motor driven vehicles in the United States.

Less obvious but actually more important is the fact that the Peteler

Jack is designed so it can be used to the limit of its lifting bar with absolute safety—and the fact that it has overstrength way in excess of its designed 3,000 lb. capacity. This is due to the high quality materials we use for its working parts.

**\$7.50** for  
"The Best  
Jack in  
the World"

*Don't fail to have your jobber  
send you a supply*

**COE-STAPLEY MFG. CORPORATION**

Executive Offices:  
135 Broadway, New York

Factories:  
Bridgeport, Conn.



# COE-STAPLEY

When writing advertisers please mention Motor World—it identifies you





The  
16-30  
OilPull

## The 1919 OilPull Opportunity for Dealers

A complete standardized line, in sizes to meet every demand of your customers—3 to 10 plow—that's the OilPull lineup for 1919.

This year the dealer can get just what he and his customers have long been asking for—the famous oil cooled, oil burning OilPull tractor in smaller sizes.

You don't need to be told of the popularity and success of the OilPull. You *know* that it has proved itself to be without an equal as a powerful, dependable, cheap oil burning outfit. The record of ten years in the hands of the farmer, working under every possible condition, has proved that beyond a doubt.

The new models are every inch OilPulls. We've put in such improvements as low platform, ratchet starter, Hyatt Roller Bearings, etc.—but those established OilPull qualities of absolute dependability, long life and low cost of operation and upkeep are "inbuilt" in every tractor that bears the name OilPull—no matter what the size.

Furthermore, with every OilPull goes a *written guarantee* of successful performance on kerosene—the *only* tractor that carries such a warranty.

With the OilPull goes the equally well known and established line of Ideal separators, known wherever grain is grown, and the choice of 20,000 threshermen and farmers. Four sizes of the Ideal are offered for 1919—meeting all

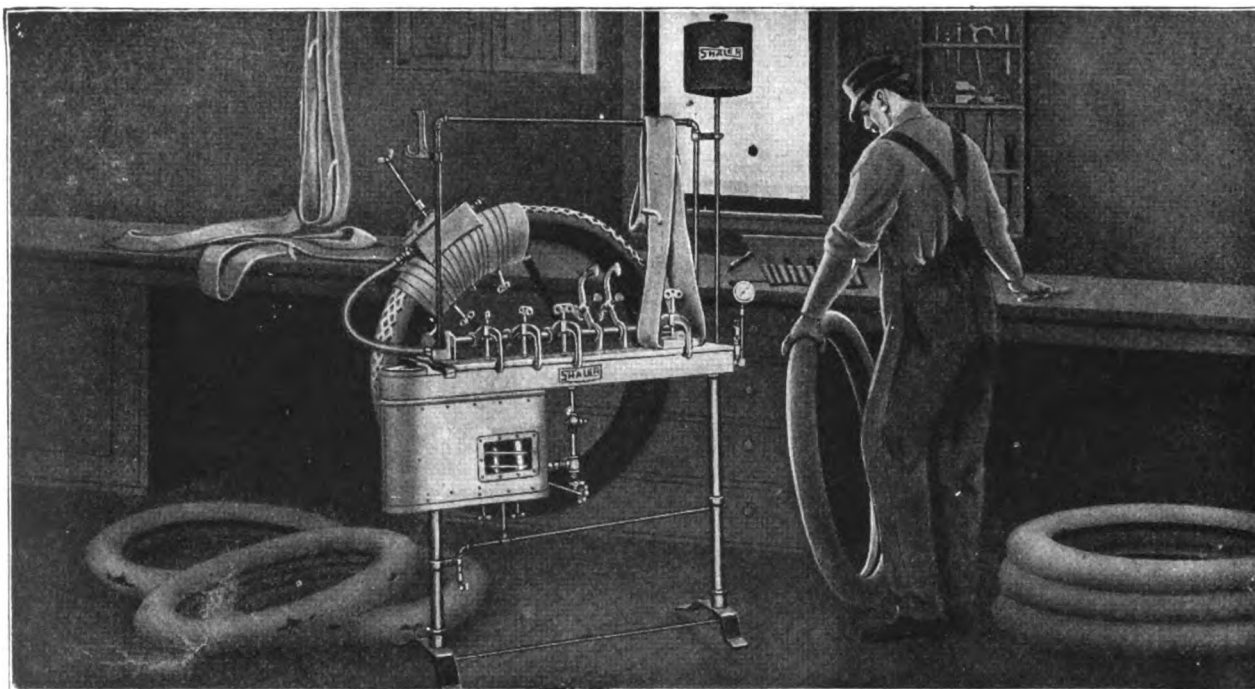
needs, from that of the farmer for his individual use to that of the custom thresherman.

And Advance-Rumely backs its dealers with the kind of Service that is due their customers. Twenty-six branch offices and warehouses bring Advance-Rumely Service to the nearest telephone. Complete stocks of machines and repairs are always on hand for *immediate* shipment—night and day service is maintained during the farmer's busy season.

A 1919 Advance-Rumely contract offers the dealer the permanent and growing profits and the volume of business that can go only with such an established, complete line of tractors and separators.

**ADVANCE-RUMELY THRESHER CO., Inc.**  
La Porte, Indiana

# ADVANCE-RUMELY



## SHALER Steam Vulcanizers For Repair Shops

are the simplest in construction — easiest to operate, and will do as much and as perfect work as the large expensive vulcanizing outfits that cost \$250 to \$500. The price of the Complete Steam Vulcanizing Plant — illustrated above, Model No. 41—Type N. P. R.— heated with either gas or gasoline is only \$70,—subject to regular trade discounts.

The Shaler N. P. R. is a portable outfit — easily moved to any part of the shop—occupies but little floor space, and so easy to operate that any boy can make perfect repairs with it.

The Shaler Patented System of Automatic Heat Control regulates it automatically. It must vulcanize just right. It can't overcure or undercure, and requires no watching or regulating.

It has large capacity—repairs 12 casings and 200 tubes a day. Handles any size or style of tube or casing.

### Model L-40 Steam Tube Vulcanizer

makes four perfect tube repairs at one time — mends any kind of tear, cut or puncture in any tube perfectly. Shaler Patented System of Automatic Heat Control. It works automatically without any danger of explosions or damaging tubes. Anyone can operate it—does quick work — a money-maker for repair shops. Model L-40 can be had with either gas or gasoline burners. Price \$35 —subject to Trade Discounts.

Ask Your Jobber or  
Write for Catalog

of the Complete Line of Shaler  
Vulcanizers for Repair Shops,  
Garages and Motorists' use.



**C. A. Shaler Company, 403 Fourth Street, Waupun, Wis.**

# EISEMANN

## Away Goes Guesswork When Facts Step In

You need not depend upon impressions or opinions—your own or the other fellow's—to decide what source of ignition will give you the best service on truck or tractor or passenger car.

The superiority of the Eisemann Magneto is one of those demonstrated facts which are not open to argument.

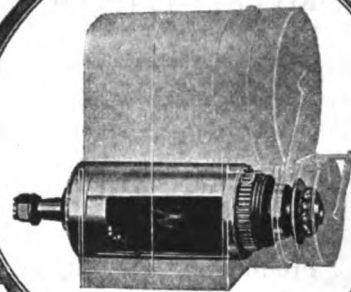
Tests—competitive tests—tests under all conceivable conditions—tests conducted by ignition authorities of unquestionable standing—have proven conclusively the superior efficiency, dependability and durability of the Eisemann Magneto.

It is for this reason and no other that 126 manufacturers of motor vehicles—including practically all the recognized leaders who have established reputations to maintain—have adopted Eisemann Magnetos as standard equipment.

THE  
**EISEMANN**  
MAGNETO-COMPANY

32 Thirty-third Street  
CHICAGO  
910 So. Michigan Ave.

BROOKLYN, N. Y.  
DETROIT  
85 Willis Ave., W.



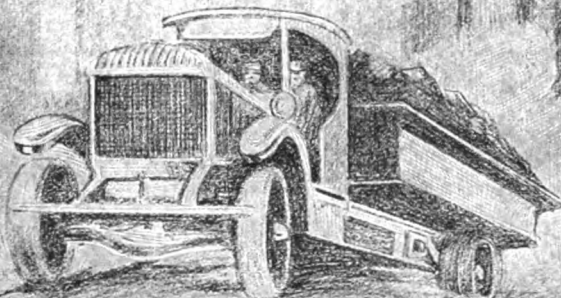
### EISEMANN SUPER-CONSTRUCTION

#### 2. The Armature

The making of the armature of an Eisemann Magneto is an excellent illustration of the exhaustive and scrupulous attention to detail through which this company has realized its determination to produce the finest magneto that can be built.

To complete the armature core and winding from raw material to finished product requires 49 distinct operations, inspections and tests. Though these processes cannot be described here, it should be pointed out that owing to the extreme care applied both to the selection of materials and to the processes of construction, Eisemann armatures practically never short circuit or burn out.

The shadowgraph above reveals the position of the armature with relation to the magneto as a whole.



AN OUTLINE OF THE  
**STATISTICAL NUMBER**  
 January 16th, 1919  
**“AUTOMOTIVE INDUSTRIES”**

The changes which have been effected in the automotive field by the war, and the new outlook for reconstruction, suggest the necessity for a comprehensive survey of the conditions and tendencies.

Just now such a survey will perform a service of particular value, presenting the picture of developments in peaceful times and changes from war's necessities.

The estimate of future necessities must be based upon survey and analysis of past performances and present conditions.

It is this important summary which will be presented in “AUTOMOTIVE INDUSTRIES” January 16, 1919.

The outline given is, of necessity, a mere skeleton of what the actual publication will contain. It is offered as an indication of its scope and character and not as a measure of its extent.

It will take up

### FARM TRACTORS

Production, general, by years and by units.

Usage, in different states and under different conditions.

Market, as indicated by the agricultural requirements, in detail.

The types of tractors and their development.

Export conditions.

### MOTOR TRUCKS

Production, general, by years and in other details.

Use and possibilities, by states, by capacity and by industries.

Export conditions.

Specifications showing types and developments.

### AUTOMOBILES

Production, by years, by states and general.

Use, by states.

Export conditions.

Types and developments.

Airplanes and motorcycles will be similarly dealt with.

Fuel statistics will be given, showing the trend of production and use.

Metal statistics will indicate the trend of prices and the production tendencies.

Standardization will be thoroughly analyzed.

Many other matters will be considered and analyzed in comprehensive detail, but sufficient has been stated to show the important character of this survey and its value as a study and reference to the automotive industry.

It is hardly necessary to refer to the position of "AUTOMOTIVE INDUSTRIES" and its authority in the field.

It numbers among its subscribers the important men in all branches of the field, its pages are read thoroughly by the industrial leaders and the copies are filed in the libraries of its subscribers.

Edited for the industry, it is read by the majority of the men who control the production of automotive apparatus, etc.

It numbers among its subscribers a small but influential group of large distributors of automotive apparatus, a number of executives in allied industries and an effective audience of foreign manufacturers and importers of automotive apparatus in the various countries of the world.

Your advertisement in this issue will be read by the buyers who control the large expenditures in the automotive field.

Copy should reach us promptly, and preferably of a kind suitable to the character of this issue.

**AUTOMOTIVE  
INDUSTRIES**  
**34 AUTOMOBILE**





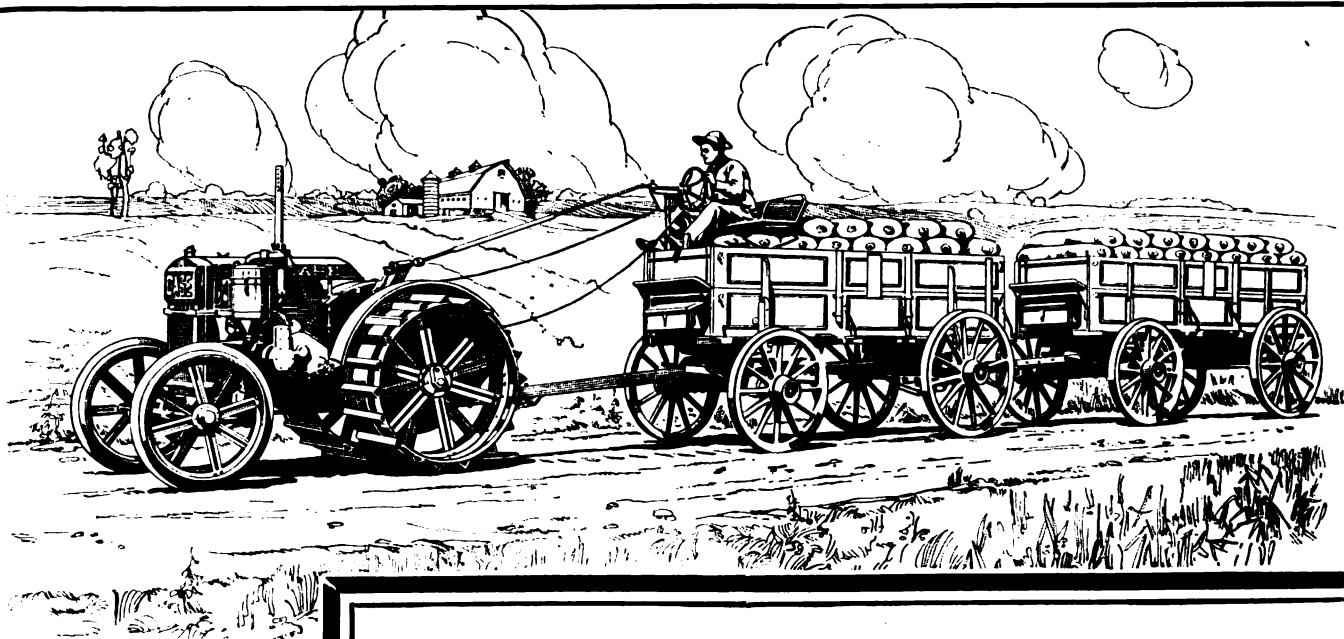
So interwoven with the problem of *producing fine finishes* are the materials and processes of construction, that each manufacturer's requirements are thoroughly analyzed and diagnosed by our experts.

# FLINT VARNISH & COLOR WORKS

F L I N T · M I C H I G A N



When writing advertisers please mention Motor World—it identifies you



## Case Superiorities

**1** Weighs about 3400 pounds. Little more than a team of horses. Low and compact with short wheelbase. Turns in 22 ft. circle. Stays on all fours.

**2** Rated 10 horsepower on drawbar, but develops nearly 14 horsepower. Rated 18 horsepower on the belt but delivers about 24 horsepower. This insures abundant reserve power.

**3** Four cylinder Case valve-in-head motor. Removable head. Motor is set crosswise on frame, affording use of all straight spur gears. This conserves power.

**4** One-piece cast main frame, forming dustproof housing for rear axle, bull pinion shaft, transmission and the bearings for these parts. Also a base for motor. This construction brings rigidity and prevents disalignment.

**5** Belt pulley mounted on the engine crank shaft. No gears used to drive it. Pulley is part of the tractor, not an extra-cost accessory.

**6** All traction gears are cut steel, enclosed and running in oil. No bevel gears, chain, worm or friction drive parts.

**7** Case Sylphon Thermostat controls cooling system and insures complete combustion of kerosene in the motor. Prevents raw fuel from passing by pistons and diluting oil in the crank case.

**8** Case air washer delivers clean air to carburetor. No grit nor dust gets into cylinders to minimize their efficiency and shorten their life.

**9** All interior motor parts lubricated by a combination pump and splash system. Speed governor, fan drive and magneto are dust proof and well oiled.

**10** Complete accessibility. No dismantling necessary. Removable covers permit you to get at parts quickly.

**11** Hyatt Roller Bearings in rear axle, bull pinion shaft and transmission case. Kingston ignition, and carburetor. Five-piece radiator with a cast frame. Core, fin and copper tube; non-clogging type.

## Farmers Want a Handy Tractor

The adaptability of the Case 10-18 Kerosene Tractor to all kinds of work is an appealing feature.

This means that its hours of use per day and its days of use per year reach the maximum. This increases its earning capacity.

The Case 10-18 is ever ready for different kinds of work, such as plowing, discing, pulverizing and harrowing, harvesting, road work, threshing, hauling, cutting feed and filling silo, baling hay, grubbing, sawing wood, etc.

No man should be satisfied with a tractor which affords the minimum use. Many farmers get over 100 days' use per year from their tractors.

The Case 10-18 offers dealers dozens of sales advantages.

It is small and compact. It weighs little more than a team of horses.

Delivers 33 per cent more power than rated.

This reserve protects the tractor when unusual conditions are met with—such as grades or tough spots in fields.

It handles easily two 14-inch plows. It will drive a 20x28 Case Thresher with all attachments. For every operation requiring a similar amount of power, this sturdy tractor sets the pace.

In this Case 10-18 are found dozens

of advancements. For instance, it has a one-piece main frame, with a four-cylinder engine mounted crosswise. This construction affords a dust-proof housing for the rear axle, bull pinion shaft, transmission and the bearings for these parts. It brings rigidity and prevents disalignment of gears, which are all cut steel and fully enclosed.

Another feature is its economical consumption of kerosene. It has a Case Sylphon Thermostat which controls the cooling system and insures complete combustion of kerosene. And it prevents raw fuel from passing by the pistons and diluting oil in the crank case.

An improved air washer delivers clean air to the carburetor. No grit nor dust can get into the cylinders to minimize their efficiency and shorten their life.

Every dealer should be acquainted with all the advanced ideas in the new Case 10-18. Study the details listed at the left—study the specifications sent on request so that you may judge tractors well by acquainting yourself with the latest and best practices.

**J. I. Case Threshing Machine Company, Inc.** Founded 1842  
1485 Erie Street, Racine, Wis., U. S. A.



(822)

# BROWN-LIPE

## TRANSMISSIONS

### Inspections and Tests From Beginning to End

Carefully checked analyses of raw materials, inspections through every process of machining, heat treatment, and assembly safeguard truck and car users from trouble on the road.

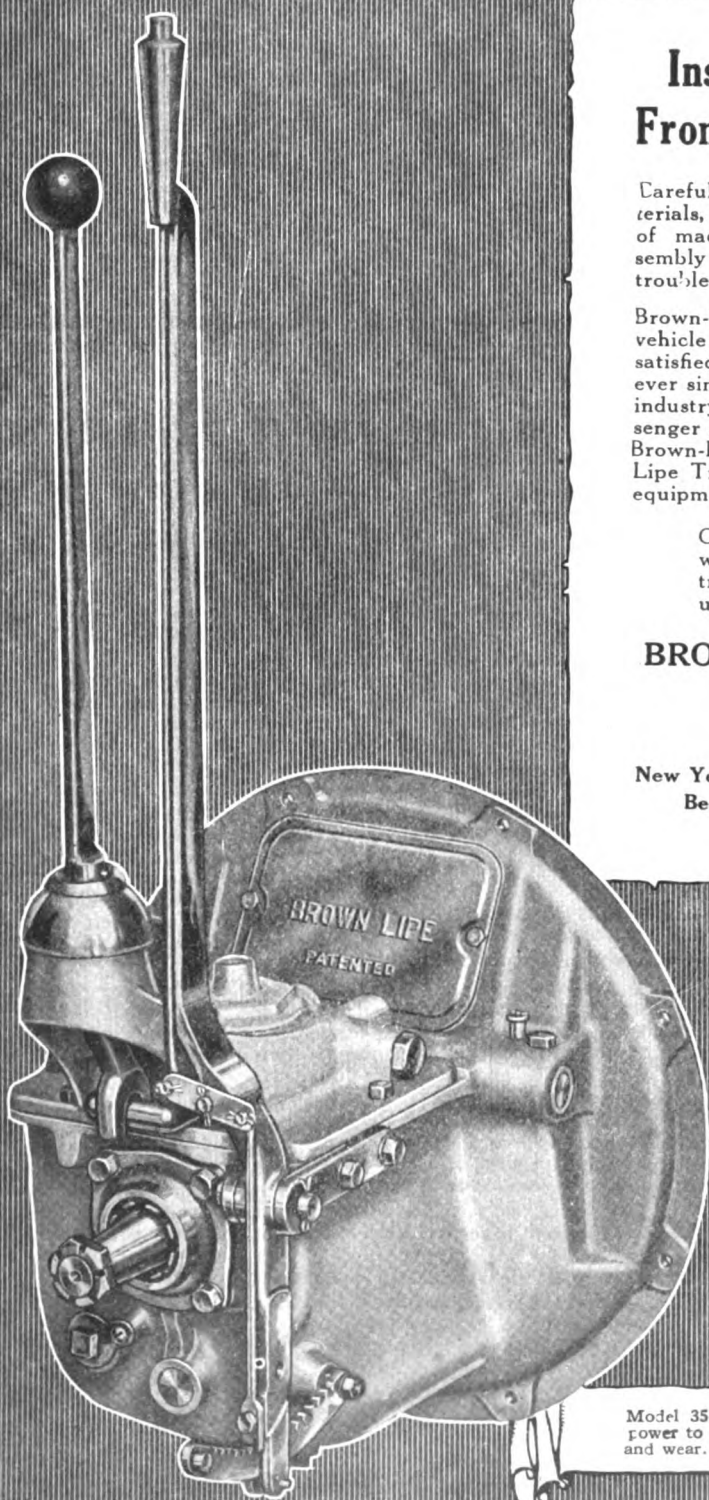
Brown-Lipe Transmissions are the motor vehicle manufacturer's best assurance of satisfied customers. This has been true ever since the beginning of the automobile industry—now more than 80% of passenger and truck manufacturers use either Brown-Lipe-Chapin Differentials or Brown-Lipe Transmissions, or both, as standard equipment.

Our Engineering Department will assist you in solving your transmission problems. Write us today.

### BROWN-LIPE GEAR CO. Transmissions

#### Representatives:

New York: Thos. J. Wetzel, 29 W. 42d St.  
Benjamin Whittaker, 21 State St.



Model 35 3-Speed, U. P. P. Transmits maximum power to drive wheels with minimum friction, noise and wear.

# NEW YORK Automobile Show

**Madison Square Garden**

**AND**

**69th Regiment Armory**

*(Both Buildings Within a Stone's Throw of Each Other)*

**February 1 to 8 inclusive**  
**FOR PASSENGER CARS**

**February 10 to 15 inclusive**  
**FOR COMMERCIAL VEHICLES**  
*(IN MADISON SQUARE GARDEN ONLY)*

*Accessories and Parts will be shown during both weeks.*

**Reserve your space now. Tomorrow may be too late. Diagrams and other information now ready for distribution. The leading makers will be at THE BIG SHOW of the year.**

**Automobile Dealers Association of N. Y.**  
**INCORPORATED**

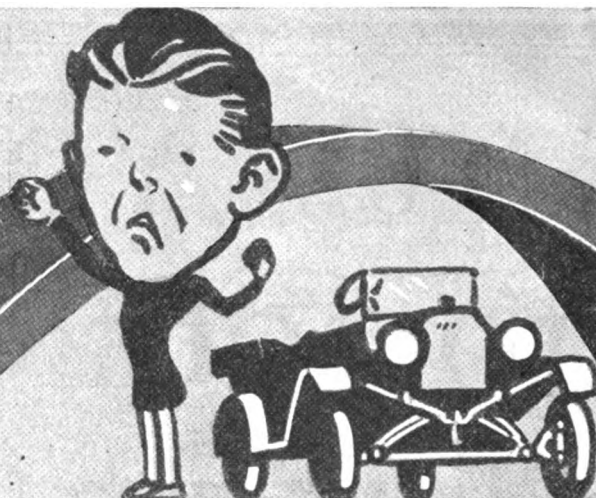
**206 West 55th St. (near Broadway)**

**New York City**

**SHOW COMMITTEE**

**Charles H. Larson (Oldsmobile), Chairman**  
**H. R. Bliss (Dodge Brothers)**  
**Charles M. Brown (Winton)**  
**Harry J. DeBear (Maxwell—Chalmers)**

**R. J. Gilmore (Packard)**  
**William C. Poertner (National—Scripps-Booth)**  
**Walter C. Woods (Peerless)**  
**Charles A. Stewart, Manager**



## Don't swear at your FORD if it wastes gasoline

If you had a leak in your gas tank, you'd plug it up.

Then why not make your pistons permanently gas-tight and stop bewailing the high cost of fuel.

Gas can never waste through or around Munger "Always Tight" Piston Rings, because the patent peening holds them to a perfect FIT and the "Always Tight" Expansion Joint compensates for wear as it occurs.



Price, \$1.25 each for  
all sizes up to 3-3/4  
inches in diameter.

The complete FORD Set consists of eight regular size "Always Tight" Rings for the lower grooves and four over-width "Always Tight" Rings for the top grooves. With each complete FORD Set a Munger Regrooving Tool and a Munger Ring Insertion Tool are included FREE.

Get them from your supply dealer or garage man.

SPLITDORF ELECTRICAL CO.,

Newark, New Jersey

Sumter Division: 1466 Michigan Ave., Chicago

### SERVICE STATIONS:

Atlanta,	10-12 E. Harris Street	Minneapolis,	816 Hennepin Avenue
Boston,	68 Brookline Avenue	Newark,	278 Halsey Street
Chicago,	2613 S. Michigan Avenue	New York,	7 W. 61st Street
Dallas,	402 S. Ervay Street	Philadelphia,	210 N. 13th Street
Detroit,	1295 Woodward Avenue	Pittsburgh,	5943 Ellsworth Avenue
Kansas City,	1827 Grand Avenue	San Francisco,	1022 Geary Street
Los Angeles,	1215 S. Hope Street	Seattle,	1628 Broadway
		Toronto,	469 Yonge Street

*Guarantee*—If these rings do not fulfill all our promises and give you entire satisfaction, return them to the dealer from whom you bought them and get your money back.

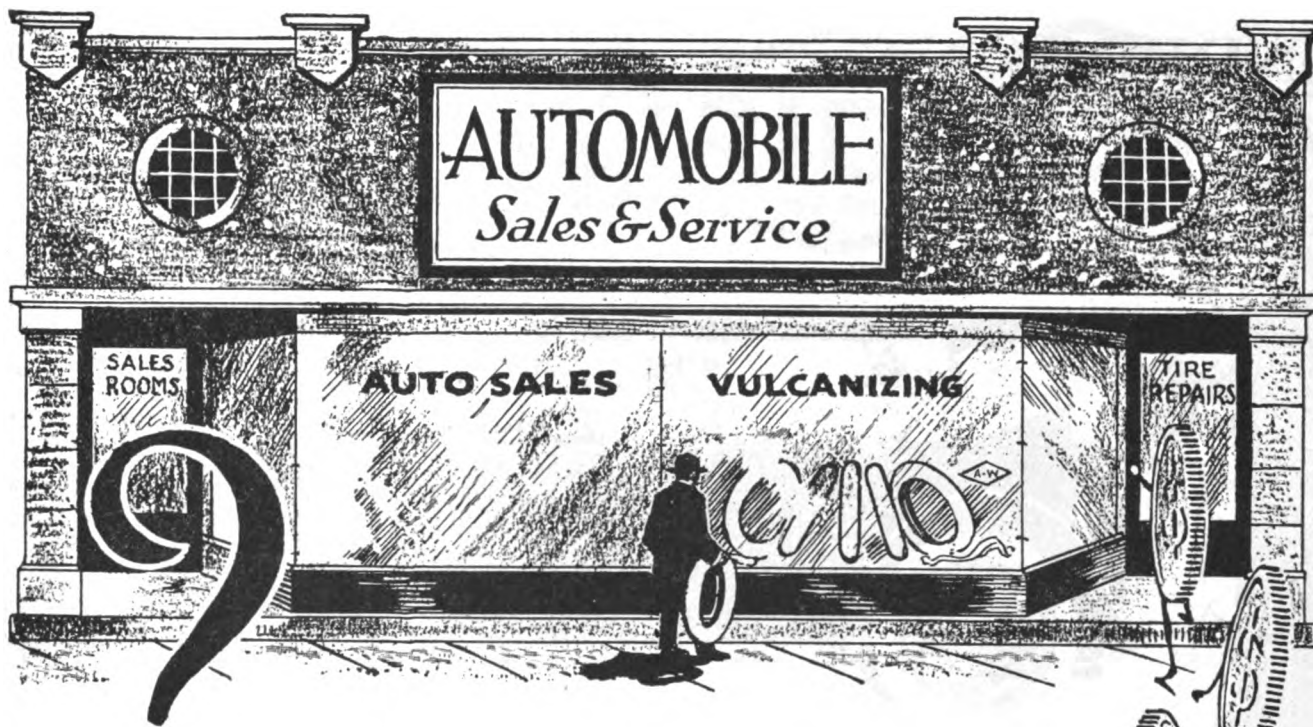
Install

# MUNGER

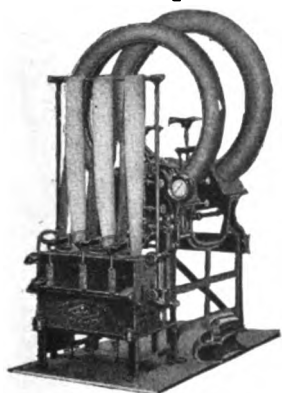
## "Always Tight"

## Piston Rings

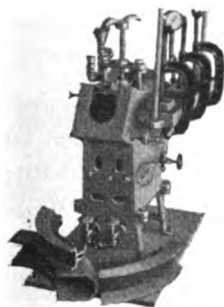




Below are only two  
of our complete line



Model "M"  
Will vulcanize two casings and  
three tubes at one time.



Model "D"  
Takes on casing and three tubes  
at one time.

## Keep the Profits Coming in

by establishing a complete department in your business  
for Tire and Tube Repairing. Hold the tire business of  
your present customers and win new ones.

Tire and tube repairing goes on all the time and pays  
three to four times the average per cent profit on motor  
cars.

But—do your tire repairing under the latest approved  
methods with one of the outfits designed by the leading  
tire engineers—an

## Akron-Williams TIRE REPAIR OUTFIT

Akron-Williams Vulcanizers are so designed that by  
the use of reducing shells all the cavities can be used on  
smaller size tires, thus practically doubling the curing  
capacity of the outfit for most sizes.

There's an Akron-Williams outfit for every shop and a  
machine or tool for every purpose.

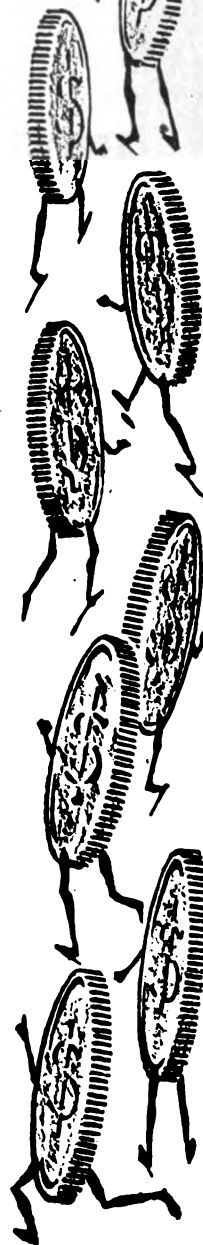
*Send for catalog and prices*

## THE WILLIAMS FOUNDRY & MACHINE CO.

Buchtel Street, Akron, Ohio

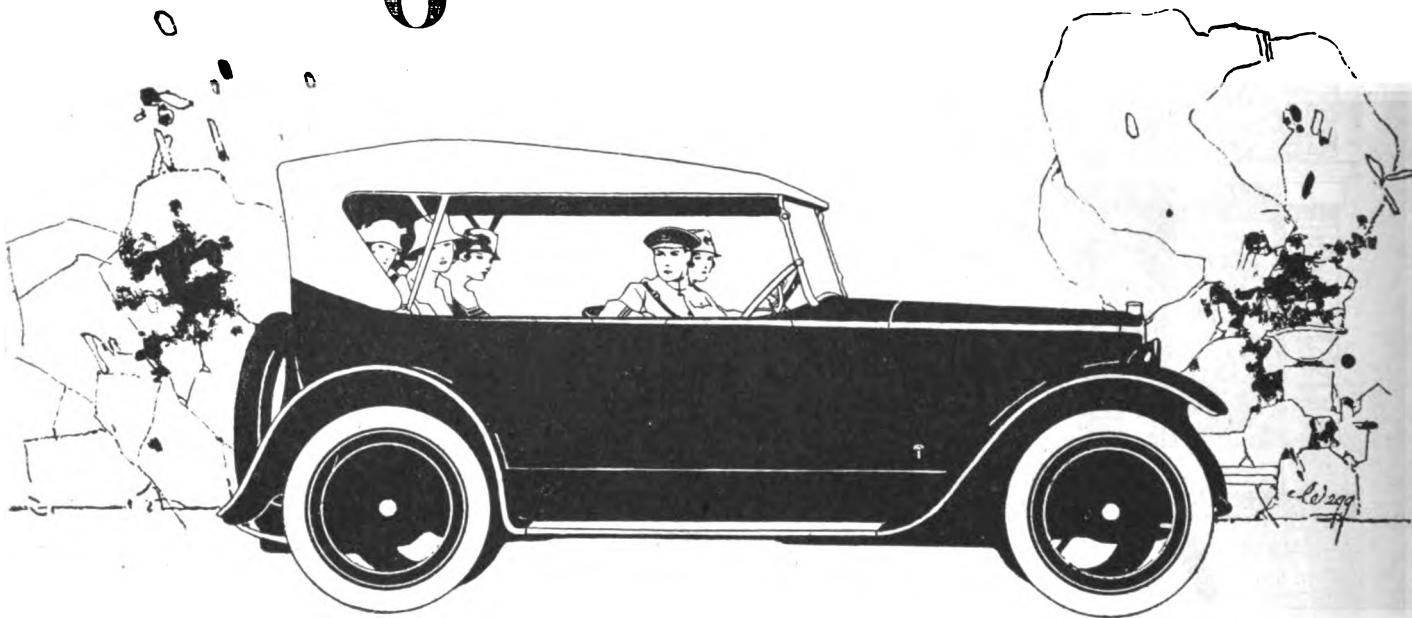
*Exclusive Distributors for California: The Waterhouse & Lester Company, San Francisco,  
Oakland and Los Angeles*

*When writing advertisers please mention Motor World—it identifies you*



# ANDERSON

## 6



## HOW THE ANDERSON SAVES YOU \$325.00

**EQUIPMENT**  
Continental Six Motor, Zenith Carburetor, Westinghouse Starting and Lighting, Connecticut Ignition, Jacobs Steering Column, Borg & Beck Clutch, Columbia Axle.

Regular Equipment: Klaxon Motor Driven Horn, Kellogg Engine Driven Tire Pump, Stewart Speedometer, Gasoline Gauge and Oil Gauge.

**WHAT** can you afford to pay for a car? You may scour the world, with a \$2,000 check in your pocket, in search of the car that represents the most value for your money.

You'll find it—in the Anderson—and get back \$325.00 "change."

For the Anderson 5-Passenger Touring Car, fully equipped, costs \$1,675.00.

No car, at \$2,000 or under, has so beautiful a custom built body as the Anderson line. The Anderson factory, it must be borne in mind, has been known the world over, during 28 years, for fine coach work. Naturally, such facilities and experience are not available for the average motor car manufacturer.

Mechanically, the Anderson knows no rival in its price field. A glance at the specifications will reveal its remarkable worth.

You can slow down to 2 miles and speed up to 60 miles on high gear. You can safely depend on at least 16 miles to the gallon of gasoline. You will find your tire mileage unusually high, and your maintenance cost unusually low.

There is no need to spend \$2,000 for a car, with the Anderson procurable at \$1,675.

**ANDERSON MOTOR COMPANY, Rock Hill, S. C.**

*Dealers: Some good territory still available.*

---

PRICES: F. O. B. Rock Hill	Model 400-A	Seven-Passenger Touring Car.....	\$1750.00	Model 400-E	Five-Passenger Sedan .....	\$2550.00
	Model 400-C	Five-Passenger Touring Car.....	1675.00	Model 400-G	Sport Touring, 70 H.P., Wire Wheels, Standard Equipment .....	2450.00
	Model 400-D	Convertible Sport Car, Straight Front Seat	1675.00			

---

When writing advertisers please mention Motor World—it identifies you



More and More  
DRIDEK  
Every Month—

The most remarkable material yet produced for automobile tops, curtains and upholstery.

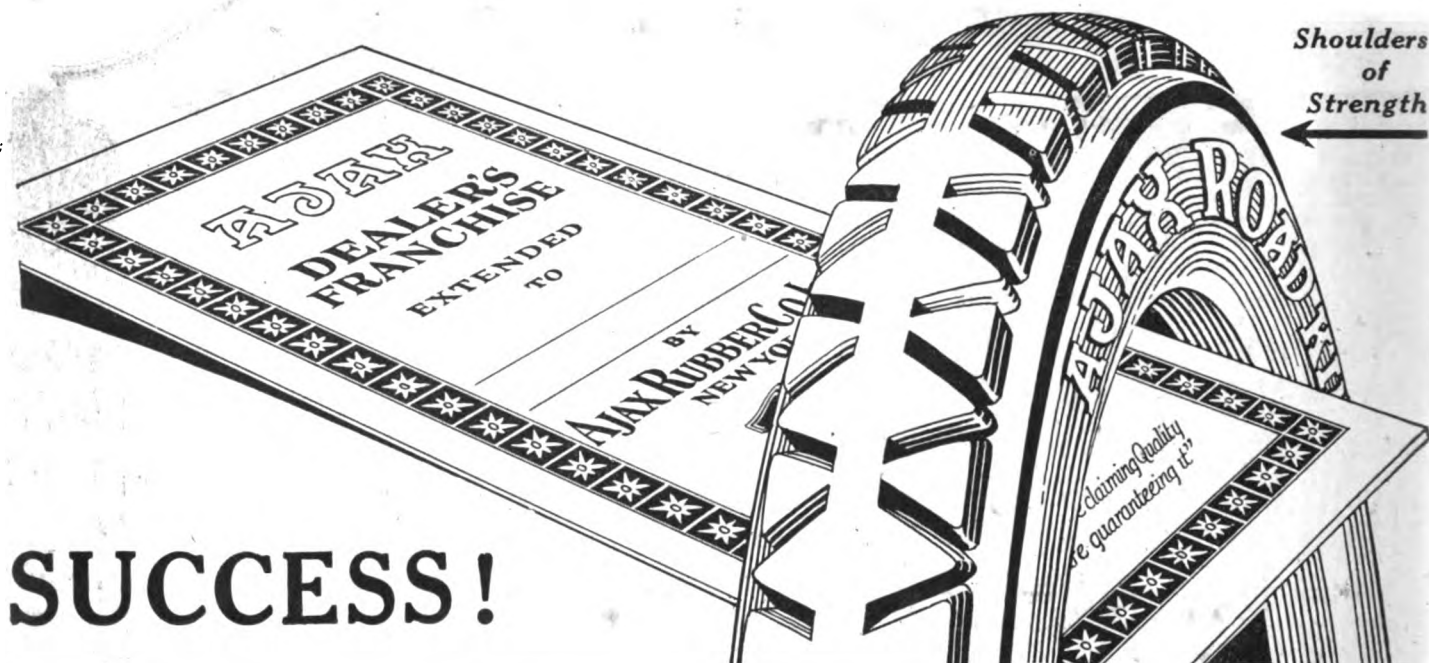
Light, pliable and waterproof.

*Send to Dept. D, for samples  
and price list*

**L. J. MUTTY COMPANY**  
BOSTON, MASS., U. S. A.



When writing advertisers please mention Motor World—it identifies you



# SUCCESS!

## The Two Biggest Assets in the Tire Field

Judge the merits of the Ajax opportunity by the success of the great army of Ajax Franchise Dealers. From Maine to Mexico, they're making money. Backed up by Ajax close co-operation, Ajax Franchise Dealers are established as the most prosperous dealers in all the tire field.

### AJAX DEALER'S FRANCHISE

Tire dealers who secure the Ajax Dealer's Franchise make the soundest, safest, most profitable connection possible. The franchise grows in value yearly. It forms the basis of steadily increasing profits. The Franchise Dealer gets complete protection in his selling zone. He gets every co-operation that this great company and all its branches can give.

He gets the selling help of huge Ajax advertising campaign in the Saturday Evening Post, the Literary Digest—the great farm papers.

### AJAX ROAD KING

And then beyond all this, the Ajax Franchise Dealer wins exclusive selling right in his zone on the mighty Ajax Road King—on Ajax Tubes—on Ajax new line of H. Q. Tire Accessories.

Ajax Road King leads them all. It has the famous Ajax Shoulders of Strength. Note that strong supporting shoulder just at the base of the tread. The Road King is 97% Owner's Choice—this big percentage of our annual output is chosen by individual car owners to replace other tires. It tops the field in repeat sales.

*NOW*—Ajax salesmen are renewing last year's Franchises. And they're closing new ones in territories that are open. How about your locality? Write at once to get all the vital facts.

**AJAX RUBBER COMPANY, Inc., New York** Factories: Trenton, N. J. Branches in Leading Cities

# AJAX TIRES

When writing advertisers please mention Motor World—it identifies you



# Spring Service for A Nation.

## VULCAN

*The Replacement Spring*



### Sign and Display Rack FREE

The Display rack and Service Sign is furnished **Free** with the first order, including appropriate advertising helps.

### America's Motorists

have been educated by national advertising to look for VULCAN Service signs when in need of Spring Replacements.

Performance of VULCAN Springs on their cars has convinced them of the Superiority of VULCAN.

### VULCAN Dealers

are profiting by the demand created through national advertising, combined with supreme quality of VULCAN Springs and convenience of VULCAN Service.

### VULCAN Service

embraces the needs of both motorists and dealers, supporting each to the highest degree of efficiency. A constant stock of over 100,000 VULCAN Springs furnishes the source of supply. The individual supremacy of each spring, because of the "built in" quality, assures satisfaction to user and distributor.

Become a VULCAN Dealer and enjoy the benefits of a ready made market.

Write for particulars regarding VULCAN.

**JENKINS VULCAN SPRING CO.**  
Richmond, Indiana

#### BRANCHES.

St. Louis, Mo.  
Minneapolis, Minn.  
Dallas, Texas.  
Reading, Pa.  
Sumter, S. C.  
Atlanta, Ga.

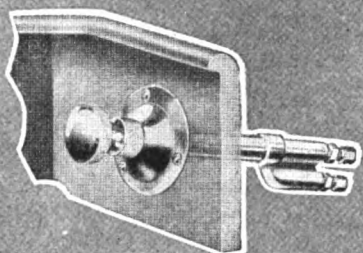
1402 Chestnut St.  
1024 Hennepin Ave.  
209 S. Houston St.  
538 Franklin St.  
29 Caldwell St.  
48 Auburn Ave.

**JENKINS VULCAN SPRING CO. RICHMOND INDIANA**

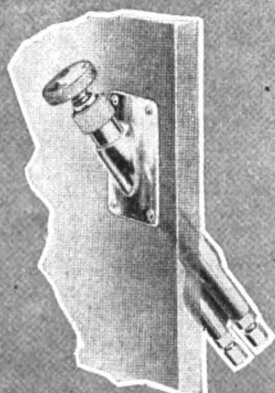


# JORGENSEN VAPOR PRIMER

## Only Primer that Vaporizes the Starting Charge



Style Straight No. A 4



Style Slant No. A 3

It does more than is ordinarily expected of a primer. And it works positively every time. You'll be surprised when you get a JORGENSEN Primer on your own car. It will sell itself to you, Mr. Dealer, during the first few cold days.

Then you will sell JORGENSEN Primers to all of your customers because you believe in the device. And every sale you make will net you a nice profit and a satisfied customer.

Don't confuse the JORGENSEN Vapor Primer with any other primer. Its basic principles are different as shown by the illustrations at the bottom of this page.

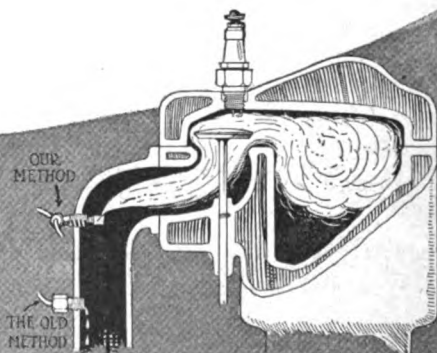
Remember our suggestion. Get a JORGENSEN Primer from your jobber or write us. We will forward one direct and bill through your jobber. See that the primer is installed on your own or a customer's car according to directions. The results will be gratifying to you and to us. Write for descriptive folder.

Furnished complete with all fittings for \$5.00. Special for Fords, \$4.50. In ordering state whether straight or slanting style is wanted and give outside diameter of main gasoline line tubing

MANUFACTURERS, JOBBERS AND DEALERS:  
Write for unusually interesting proposition.

IT VAPORIZES  
the Starting Charge!

JORGENSEN MFG. CO.  
Waupaca Wisconsin



# A "Giant"



## on Prospect Ave. Cleveland

### Packard-Cleveland Co. Takes on Giant Trucks

That Giant Trucks are the biggest dealer opportunity of today is shown by the readiness with which the highest grade and largest dealers all over the country are taking on this sensational truck. It is indicative of the trend of alert passenger car dealers like the Packard-Cleveland Co., who see in the Giant the opportunity to increase their volume of sales by taking on an exceptional truck.

#### Giant Trucks Reduce Fuel Cost 50%—They Burn Low Grade Fuels

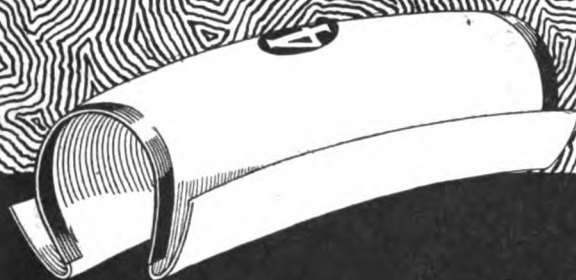
Giant Trucks attain full power on low gravity gasoline or mixtures of kerosene or distillate with gasoline, reducing fuel costs as much as 50%. The builders of the Giant are known wherever quality tools are used. Dependability—strength—economy are built into every part.

We want dealers as reliable as our truck. We know that's the money making combination. Complete information sent to dealers making prompt inquiry for territory.

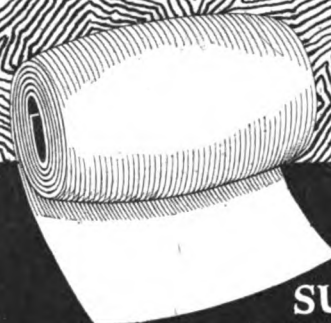
Giant Trucks have Timken worm drive, Continental motor—highest standardization throughout. Built in 1, 1½, 2 and 3½ ton models.

*Write or wire today*

**Chicago Pneumatic Tool Co., 1020 Fisher Bldg., Chicago, Ill.**



**SUPREME  
INSIDE BLOW OUT PATCH**



**SUPREME  
TIRE RELINER**

# RACINE

**SUPREME  
TIRE SUNDRIES**



## Now! Here's Your Opportunity!

Racine Rubber Company, manufacturers of the famous Extra Tested tires—Racine COUNTRY ROAD and Racine MULTI-MILE CORD—announce a full line of Racine Supreme Tire Sundries and Repair Materials. Ready now for all dealers. Act Quickly.

Here's everything you want: Supreme Inside Blowout Patch—Supreme Tire Reliner—Supreme Lace-on Boot—Supreme Hook-on Boot—Supreme Cementless Inner Tube Patch, etc. Everything! The line is complete.

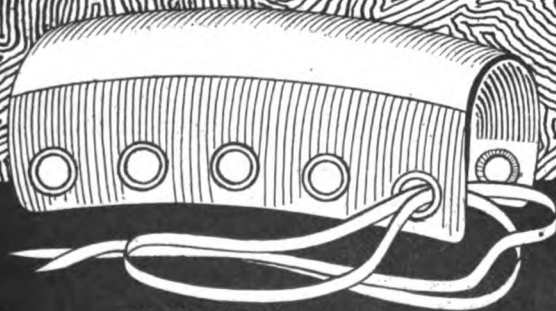
Stock Racine Supreme Tire Sundries. It's the sure way to more profits. It's the line that sells in a jiffy. Like Racine tires, Racine Supreme Tire Sundries are Extra Tested.

Big advertising campaign on Sundries in Saturday Evening Post—a campaign entirely separate from campaign on tires.

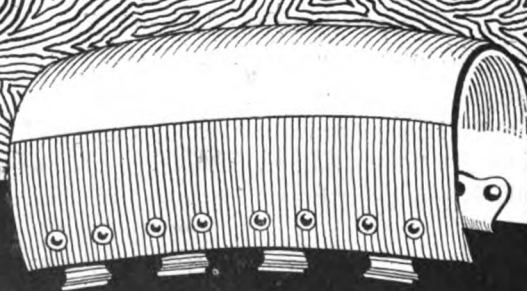
Write NOW!

**Racine Rubber Company**

Racine, Wisconsin

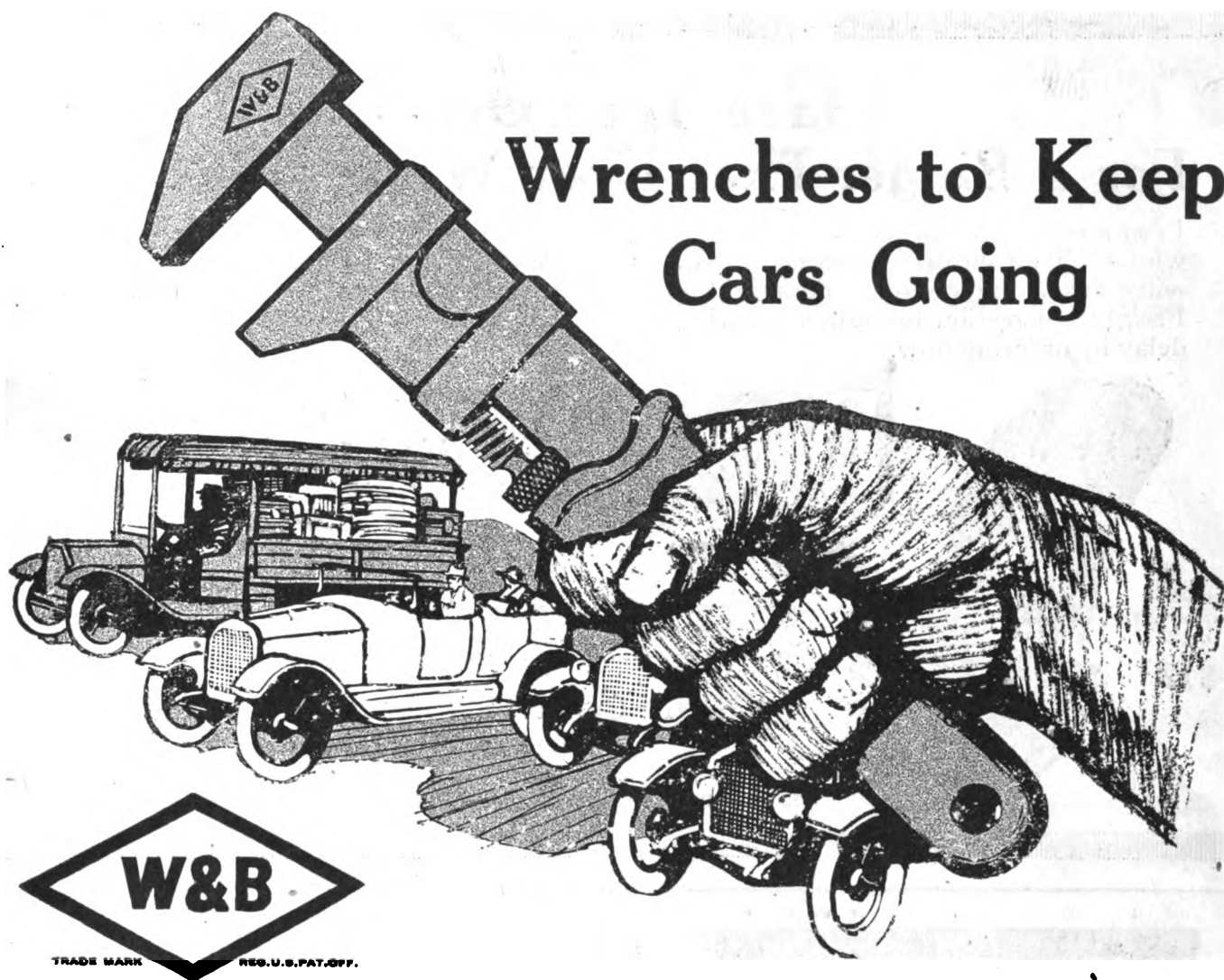


**SUPREME  
LACE-ON-BOOT**



**SUPREME  
HOOK-ON-BOOT**





When you adopt Whitman & Barnes Wrenches for standard equipment you serve both truck and truck driver, car and car-owner. You furnish the car with wrenches equal to the hardest wrench tasks; you relieve the car-owner of fear and worry about the right wrenches to care for knocks and rattles.

Whitman & Barnes Screw and Drop-forged Wrenches are preferred by motor mechanics; they know wrench quality. Motorists depend on you to give them what they ought to have. When it comes to wrenches specify Whitman & Barnes quality.

There is a Whitman & Barnes automobile and motor truck wrench for every wrench need. Write for catalog No. 91.

Send us your drop forging blue prints and specifications for estimates.

**The Whitman & Barnes Manufacturing Co.**

General Offices: Akron, Ohio

Factories: Akron, O.; Chicago, Ill.; St. Catharines, Ont.

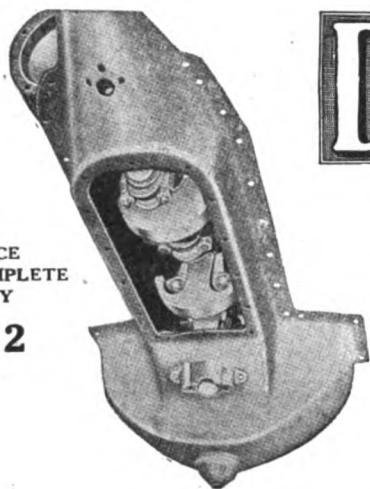
**Whitman & Barnes** Established 65 Years

When writing advertisers please mention Motor World—it identifies you

Digitized by Google

## Place Your Orders For a Bigger-Than-Ever Winter Business

Ford production has been resumed once again. More Fords than ever will be in use this winter. That means an increased demand for Dunn's Counterbalances for Fords. You will do well to place your orders right now so you won't be disappointed later in the winter. Freight congestion brought on during the winter months will soon be with us. Save delay by ordering now.



PRICE  
COMPLETE  
ONLY

**\$12**

### DUNN'S COUNTERBALANCES *for FORDS*

MORE POWER — MORE SPEED — MORE ECONOMY  
A PERFECTLY BALANCED CRANKSHAFT

When attached to a Ford Engine Dunn's Counterbalances produce a perfectly balanced crankshaft, which in turn means a big reduction in vibration. Vibration in the motor will reduce power and speed because vibration is nothing more nor less than lost motion or power. Reduce vibration and you automatically increase power and speed. The time of installation is less than an hour.

Any Ford engine can now have a perfectly balanced crankshaft similar to the most expensive cars. DEALERS: We are receiving many orders direct that should be yours. The profits on these orders would be mighty pleasing to you. We can fill orders immediately. Wire or write today for our proposition. (Mail orders filled—where we are not represented—when accompanied by cash or specified C. O. D.)

### DUNN COUNTERBALANCE COMPANY

Dept. 1, Clarinda, Iowa

Western Representative: Dunn Counterbalance Sales Co.  
1220 San Pedro Street

Los Angeles, California



93

## A Pointer

Poor tools or lack of tools is the greatest hindrance the repair man has. The novice with an assortment of good tools can accomplish more.

No garage equipment is complete without a GTD Screw Plate. Not only will it recut jammed threads, but new threaded parts can be made—and it's mighty hard to get spare parts now-a-days.

GTD Screw Plates are made in over a hundred assortments. Yours is among them.

Write for New Small Tools Catalog No. 40 describing Screw Plates, Taps, Dies, Reamers, etc.

### GREENFIELD TAP & DIE CORPORATION

GREENFIELD, MASSACHUSETTS

New York, 28 Warren St.

Chicago, 13 So. Clinton St.

Detroit Office, 74 Congress St., W.

Canadian plant, Wells Brothers Company of Canada, Ltd., Galt, Ontario



Cap for Little Giant Collet, showing die slot and adjusting screws



Little Giant Die

Buy a  
**G T D Screw Plate**

with Little Giant Adjustable Reversible Dies



# DORT

*Quality Goes Clear Through.*

## The Desirability of the Dort Agency

It is now generally known that the Dort agency is a sound and profitable business connection.

The car has established itself as an ably designed, well constructed motor mechanism of proved worth.

It is attracting a steadily growing number of buyers.

The company has fixed its place in the industry as a strong and progressive organization.

Its relations with dealers are based upon sane and fair business methods. So that quite naturally the Dort agency has come to have a high standing in the esteem of the automobile trade.

It is not a usual thing for dealer territory to be available.

It would not be so now were it not that the Dort Company is intent upon adding strength in several localities to its already strong dealer organization.

These few desirable agencies will of course be closed shortly.

Enquiries should be forwarded at once to the SALES DEPARTMENT of the Dort Motor Car Company.

---

DORT MOTOR CAR COMPANY

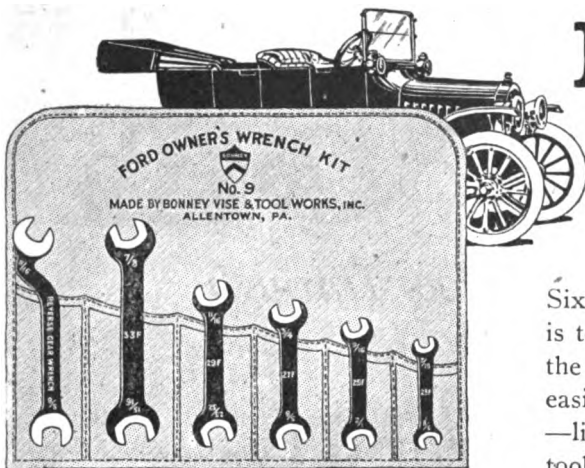
---

*Flint Mich.*

Canadian Factory, Gray-Dort Motors, Ltd., Chatham, Ontario

When writing advertisers please mention Motor World—it identifies you

**\$2.75** in canvas roll or  
\$2.50 in cardboard  
box.



# BONNEY FORD OWNER'S WRENCH KIT

## The Tool Kit with a Waiting Market

Six sturdy drop-forged wrenches with steel teeth—whose business is to make the Ford rattle-proof and trouble-proof. Every nut on the Ford car finds its master in one of these wrenches and yields easily to their case-hardened jaws. Of Bonney quality throughout—light, indestructible, well-balanced. The sight of these six handy tools in their neat, compact canvas casing will tell you that a ready sale awaits this handy wrench set.

This BONNEY Kit is a necessary adjunct to the Ford car and is a rapid-fire seller. We want a few more live dealers, to whom we offer generous discounts and an unusual selling proposition—WRITE.



This mark has stood  
for quality in tools  
since 1876

## Bonney Vise and Tool Works

713 Meadow Street

Allentown, Pa.



YOU can "Hooverize" on clothes  
if you keep a COVERALL  
garment in your tool kit to use  
when making emergency repairs.

## Stifel's Indigo Cloth

Standard for over 75 years



ASK YOUR DEALER for garments of STIFEL'S INDIGO!

We are makers of the Cloth only

**J. L. STIFEL & SONS**

Indigo Dyers and Printers WHEELING, W. VA.

Sales Offices for CLOTH only

NEW YORK.....260-262 Church St.	ST JOSEPH MO.....Saxton Bk. Bldg.
PHILADELPHIA.....1033 Chestnut St	ST LOUIS.....928 Victoria Bldg.
BOSTON.....31 Bedford St	ST. PAUL.....238 Endicott Bldg.
CHICAGO.....223 W. Jackson Blvd	TORONTO.....14 Manchester Bldg.
BALTIMORE.....Coca Cola Bldg.	WINNIPEG.....400 Hammond Bldg.
SAN FRANCISCO...Postal Telegraph Bldg	MONTREAL.....Room 508, Read Bldg.
VANCOUVER.....506 Mercantile Bldg	

is the material out of which the strongest, sightliest work garments are made. You can tell whether the garment is made of genuine Stifel's Indigo by looking for this trade-mark on the back of the cloth inside the garment.



**IT'S THE CLOTH IN THE GARMENT  
THAT GIVES THE WEAR**

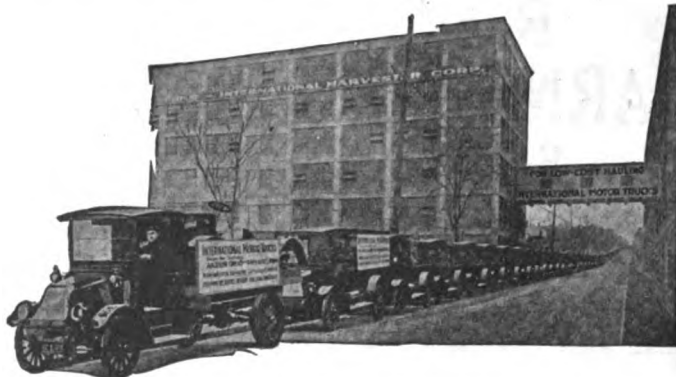
**Stifel's Indigo Overalls and Coveralls are  
sold by dealers—everywhere**

# Sell International Motor Trucks

If you want to keep your sales organization together and make good use of more or less idle service station equipment sell International Motor Trucks.

In the last four years, and especially this year, the motor truck has proved itself an economic necessity. In many lines of business it is already indispensable. In every line there is interest in motor trucks. The field for International Motor Truck sales is as wide as American business.

Dealers who can sell motor trucks should be securing a line right now—the best line they can get. Conditions, contracts and deliveries will not be so favorable again for a



long time. Every day's delay makes them less favorable.

Get a contract now, today, if you can, for the International. There is no better truck, none that meets the needs of more prospects, no easier truck to sell, and no concern that can make better deliveries, or give its dealers more assistance. Write the address below for complete information.

## International Harvester Company of America

(Incorporated)

Harvester Building

Chicago, U S A

## The "TELL-U-WHEN" AUTO SAFETY SIGNAL

Fully guaranteed by one of the Largest Manufacturers of Automobile Lamps in the World

### DEALERS!

Here is a light signal you can actually sell. It brings you a good profit and helps to advertise your place of business—attractively—in a high class way—free.

Traffic Authorities recommend it. Experienced Motorists and truck owners use it. It is not "just like the others." It is principally distinguished by its radical difference and simple practicability. Truck and car owners recognize these features on sight.

Progressive Jobbers and Dealers stock it—and sell it!

You are neglecting a good, sound business opportunity if you do not write at once for our unusual proposition.

List Price } \$5.00

### DO YOU KNOW

that 65% of all collision accidents settled for by Insurance Companies are REAR-END COLLISIONS? The "TELL-U-WHEN" Signal is *needed*.

### WRITE for OUR PLAN

to give your place a free advertisement in Blue Book at bottom of page containing main trunk line entering your town, where motorists are *bound* to see it.

Simple operation. Driver merely presses this button to change Signal from red to green.

THE BUNYAN SIGNAL LIGHT CO., INC.

9703 Madison Avenue

Cleveland, Ohio

Note this Dandy Display Stand—for Dealers!

# Read What BARNEY OLDFIELD Says About the DRI-KURE RETREDER

Here's  
an O. K.  
from  
a Man  
Who  
KNOWS

Western Vulcanizer Mfg. Co., March 5, 1918.  
Los Angeles, Calif.  
Attention Mr. E. K. Wheelock, Sales Manager.  
Gentlemen:—

My opinion in regard to your "Dri-Kure Retreder", based upon our actual tire repair experience in my shop, is that it is all right. My men are making old tires into good looking, serviceable product, and saving the automobile owners many dollars.

Some of the automobile racing men are using tires that have been retreaded on your machines, which shows the confidence men who know have in the "Dri-Kure Retreder" product.

My tire repair business, especially the retreading part, has increased very rapidly. I shall need more of your equipment soon.

You know me,

BARNEY OLDFIELD.



COMING from an authority like Barney Oldfield, this enthusiastic expression of satisfaction means but one thing—that the DRI-KURE Retreder is a real profit building machine and will establish you as the leading tire repairman in your town.

This invention overcomes the well known disadvantages of kettle curing, which have prevented retreaded tires becoming as popular as they should. The DRI-KURE Retreder insures—

No shrunken beads—  
No stretched beads—  
No drying up of the friction—No separation or general deterioration of fabric—No porous or partly cured tread.

## BECAUSE—

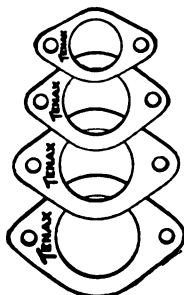
The beads are not cured again and no steam can get into the fabric body.

Thousands of experienced as well as new tire repairmen are using DRI-KURE Retreders every working day in the year. You too can make big profits. Send for literature and prices. We have some facts you would like to know.

Western Vulcanizer Mfg. Co.  
150 No. Desplaines Street  
CHICAGO U. S. A.



## COMPRESSED ASBESTOS SHEET PACKING GASKETS



Gaskets

A complete line of strictly high class Asbestos Products with attractive prices for automotive jobbers and dealers.

Tenax Compressed Asbestos Sheet Packing—In sheets 50" x 50". Special size 50" x 150". Thicknesses of 1/32" to 1/4" inclusive. Withstands temperature of 1200 degrees Fahr.

Tenax Gaskets—Insure tight joints. Extremely light weight. Won't blow, burn or squeeze out.



Vulcan Fan Belts

## TENAX ASBESTOS PRODUCTS



Brakebestos

Brakebestos—An asbestos wire inserted lining for truck and tractor friction brakes, clutches, etc. Guaranteed heat, oil and water proof.

Vulcan Fan Belts — Non-slipping, long life type. Furnished either endless or detachable style.

Jobbers and Dealers — Write for attractive proposition.

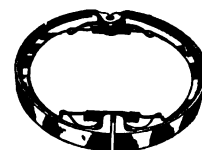


Sheet Packing

## Advance Packing & Supply Company

Tractor Dept.

13-15 N. Franklin St., Chicago, U. S. A.



## BRAKE-SHOES For Fords

THESE Shoes are of the highest grade iron and can be furnished in one-piece unlined, or two-piece, either lined or unlined.

The lined Shoes are equipped with genuine Thermoid Lining, or with our less expensive "Rival" Lining, which is a high grade lining, wire inserted. All lining is attached with Hungerford Coppered Rivets, which wear down evenly with the lining.

It is needless to call attention to the superiority of the lined type of shoe, which will wear on an average four times as well as an unlined one. The average delivery wagon of the Ford type makes so many stops (at least fifty a day) that this better wearing feature is of great importance.

Immediate deliveries available.

Individually boxed, in sets of five, for the trade. Quantity prices obtainable upon request.

**Goodrich**  
AUTOMOBILE PRODUCTS

GOODRICH-LENHART MFG. CO.

Members of National Association of Automobile Accessory Jobbers

418 Widener Bldg., Philadelphia, Pa.



**W**ITH his hand on the Pistol Grip and his finger on the Trigger Switch, any mechanic, skilled or unskilled, can operate the B & D Portable Electric Drill with unfailing accuracy, exceptional speed and without fatigue.

This positive control means the elimination of broken bits, ruined jobs and lost time. Write for descriptive catalogue and name of nearest distributor.

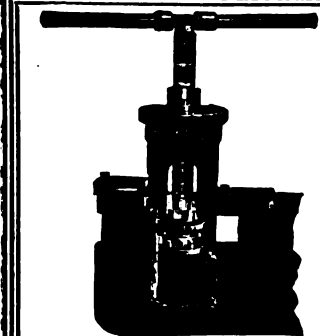
**Black & Decker Manufacturing Co.**  
107 South Street Baltimore, Md.

New York: 68 Beaver St.  
San Francisco: 918 Hearst Bldg.  
Chicago: 1512 S. Michigan Ave.  
Boston: 189 Massachusetts Ave.  
Philadelphia: 502 Widener Bldg.

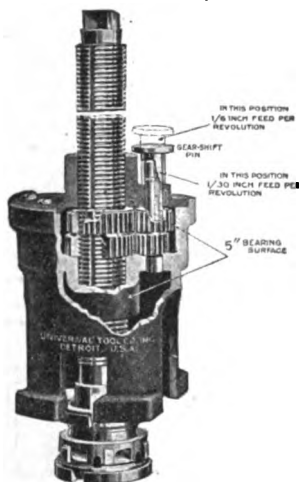
Atlanta: 701 Healy Bldg.  
Minneapolis: 317 Plymouth Bldg.  
Dallas, Texas: Bailey Drake Co.  
Montreal, Canada: Northern Electric Co.  
London, England: R. G. Bothermal.

## B & D PORTABLE ELECTRIC DRILL

*"With the Pistol Grip and the Trigger Switch"*



On closed end cylinder.



Note the heavy square threads—the five inch bearing-surface on the feed screw.

## You Can Do It Yourself

You can handle any cylinder reboring job that comes along at a profit.

With a Universal Cylinder Reboring Tool you can rebore a cylinder on any motor in twenty minutes or less.

And do a perfect job—absolutely smooth—a perfectly round, straight bore—ready for the pistons. One operation is all that is necessary.

The tool is adjustable—you can make a cut of one or thirty-one one-thousandths of an inch in a single operation.

There is nothing complicated about it; you simply clamp the heavy base firmly on the motor or cylinder and bore the cylinder by hand or under a drill press—the tool centers itself.

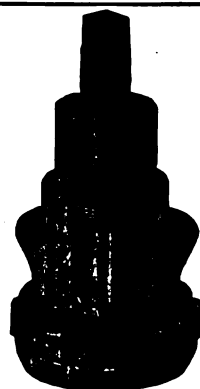
The feed bar has square threads of six pitch and when the gear shift pin is pushed down you get a thirty pitch thread which gives a fine feed and smooth cut.

Manufacturers of the finest motors who have tested out this tool use it and have adopted it as standard for their equipment.

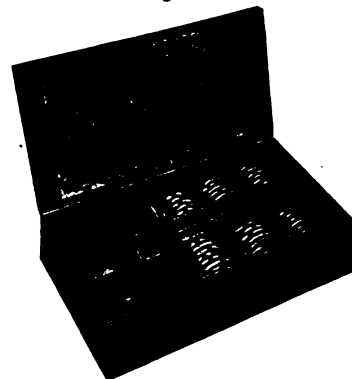
Catalogues describing this tool in detail with prices will be mailed promptly on request.

*See current issue of Automobile Trade Directory  
for list of jobbers carrying complete stock.*

**THE UNIVERSAL TOOL CO., Inc.**  
916 Beaubien Street, Detroit, Michigan



Cutter head—one turn of adjusting pin sets the six cutting tools.



The tools come packed in a substantial hardwood chest—inventory list and operating directions on inside of cover.



# WATSON UNIVERSAL SERVICE TRAILERS

**Short Turns** Watson Trailers are built to handle heavy loads in tight places—and to do it easily. They turn in their own length.

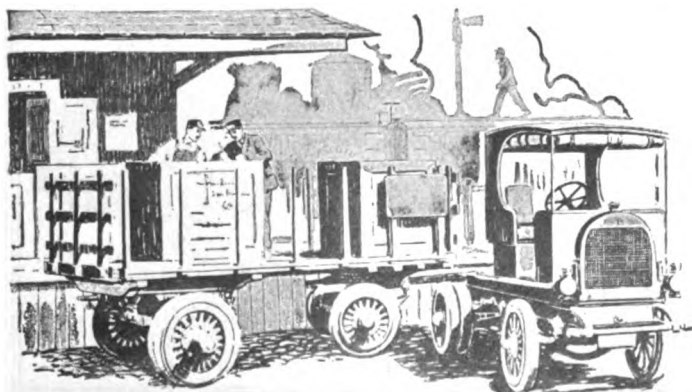
It is not uncommon to see three Watson Units turning in a 20-foot street—without backing.

The fifth wheel on the front end of every Watson Trailer is, we believe, superior to the double hitch principle which sacrifices turning radius and causes time loss and bother—for backing, unhitching and hitching. Neither do we believe that "tracking" is practicable for drawn vehicles. More than that, Watson engineers can prove the so-called tracking vehicle decidedly disadvantageous for difficult turning.

Let us present Watson Universal Trailer facts and our Business Building plan for Watson Dealers.

## Watson Wagon Company

40 West Center Street  
Canastota, N. Y.



## 100% WATSON TRACTOR

*The Mastodon of the heavy-hauling field. Capable of drawing immense tonnage; yet as flexible as a little pleasure car! And economical! Write for details.*



### NEW YORK REPLACEMENT COILS AND RESISTANCE UNITS



TYPE D

**Service Stations  
AND  
Garagemen**

Handsome profit and satisfied customers are yours by installing our full line of Replacement Coils for all Battery Equipped Cars. Circular gives full details.



TYPE A



TYPE C



STYLE A  
STYLE D



TYPE B



TYPE F

Western Distributors:  
Cray-Heath Co., 1440 Michigan Ave., Chicago, Ill.

### NEW YORK COIL COMPANY

338 PEARL ST. NEW YORK CITY

### What Garagemen Think About "TRIPLEXD"

Extract  
No. 10

### Gasoline Proof

(Another Testimonial)

"...Wouldn't have any other kind."

"A LENGTH of your Triplexd Hose came with the Allen Pressure System which I installed in July, 1917. Since that time 30,800 gallons of gasoline have passed through it. The outside covering of the hose shows very little wear and as yet I did not have to clean the filter in the nozzle, which always clogged up rapidly when using other hose."



D. L. Ormsby,  
Hilltop Garage,  
447-453 West 151st  
St., New York City.

Watch for What Garagemen Think from Week to Week

## "TRIPLEXD"

METAL HOSE & TUBING CO.  
INCORPORATED  
350 Tillary St.  
BROOKLYN, N. Y.

When writing advertisers please mention Motor World—it identifies you

## Keep Your

Valves  
Valve Springs  
Bolts  
Piston Rings  
Bearings  
Bearing Cones  
Grease Cups  
Cotter Pins  
Spark Plugs  
Hose Clamps  
and  
Miscellaneous  
Supplies  
and  
Repair Parts  
in an

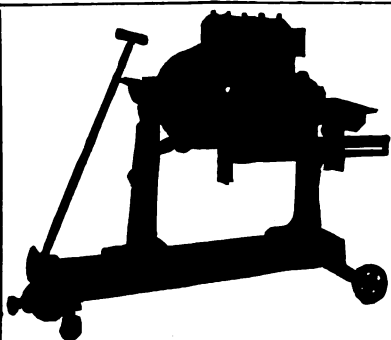


## HB Stock and Accessory Bin

An attractive, serviceable and economical equipment for keeping stock where it is easy to find. Better and cheaper than built-in bins. Sturdily built, with front partition and ends of genuine oak with durable light-grained finish. Back is of sheet steel. Contains 108 compartments, 5 inches wide, 5 inches high and 8 inches deep, each compartment bearing a card holder for indexing contents. Bin stands 65 inches high, 7 feet long, 10 inches deep. Shipping weight, 275 pounds. Price \$38.40. Shipped direct from factory. Sold under absolute money-back guarantee. You run no risk in ordering from this ad.

Write for information concerning full line of Garage Files and Cabinets.

Hobart Brothers Company, Box W124, Troy, Ohio



**The Only  
Engine Stand  
THAT  
PROPERLY  
MOUNTS  
Every Type  
of Motor  
Suspension**

And supports it in any position, so that the workman may reach all parts with ease and safety.

## The MANLEY "EVERY WAY" ENGINE STAND

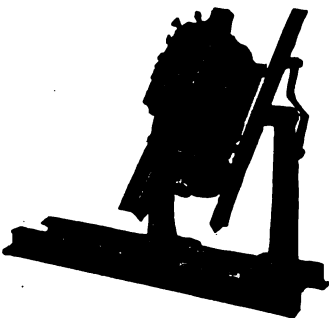
It can be anchored securely to the floor, or moved about the shop easily on roller-bearing casters, as occasion demands.

It can be adjusted to every position in a circle making it equally easy to work on valve mechanism, clean out carbon, grind valves, take up crankshaft, connecting rod, bearings, etc. In each position engine is rigidly locked by two side braces, leaving workman absolutely free and unobstructed. It supports the engine solidly, never gets shaky, and should last a lifetime without repairs.

Prices (with complete equipment), Stationary, \$80; Portable, \$90.

**The United Engine &  
Mfg. Co.**  
Hanover, Pa.

For 4-point suspension, the brackets are bolted directly to cross arms, having 100 holes. For 8-point, adjustable cross bar shown in cut is provided.



## Shoe Your Truck with Kelly-Springfield Caterpillars



They are live; they grip; increase traction; give easy riding cushion; stay cool, and when it comes to mileage, the figures sound extravagant until you ask for *proof*.

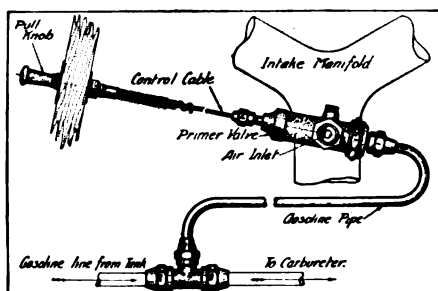
## Kelly-Springfield Tire Co.

Executive Offices  
Seventh Ave., at 57th St.  
New York

General Sales Department:  
4614 Prospect Avenue  
Cleveland, Ohio

*Sell the Guaranteed, Never Failing,  
Battery Time and Labor Saving*

## COPLEY PRIMER



**If motors were hard to start all summer,  
what will happen this winter?**

With a dependable Copley Primer installed, any engine **WILL START** on the first turns regardless of cold and other adverse conditions. This Primer delivers to the engine a rich but highly explosive charge of carefully determined proportions at the correct time, and continues to do so as long as the Primer is held open.

It is an auxiliary carburetor and can be installed in 60 minutes or less and is controlled from the dash.

**LIST PRICE, \$5.00**

Jobbers and Dealers—Send today for descriptive matter and discounts.

**BAY STATE PUMP COMPANY**

100 PURCHASE STREET

BOSTON, MASS.

# GILL



## Carbon Formation

Carbon Formation is the bug-bear of motorists. Leaky valves, fouled spark plugs, pre-ignition, these evils are the results of lubricating oil entering the combustion chamber.

The joint of the GILL PISTON RING is so constructed that it is impossible for lubricating oil to pass through—under or by it.

**GILL MANUFACTURING COMPANY**  
351 West 59th Street CHICAGO, ILLINOIS

## The Perfect One-Piece PISTON RING



**WHEREVER** a real truck is demanded the Oneida has earned the right of first consideration.

Designed by engineering skill second to none, powered to meet every emergency of load and road, it stands as a great achievement in the motor truck world. Dealers: Write or wire. Your territory may still be open. 1, 1½, 2, 3½ and 5 ton models. All worm drive.

**ONEIDA MOTOR TRUCK CO.**

Dept. 642

Factories: GREEN BAY, WIS.

**PROMPT DELIVERIES!**

# ONEIDA

## MOTOR TRUCKS

# Swinehart

## Truck Tires

NON-SKID  
SEMI-  
PNEUMATIC

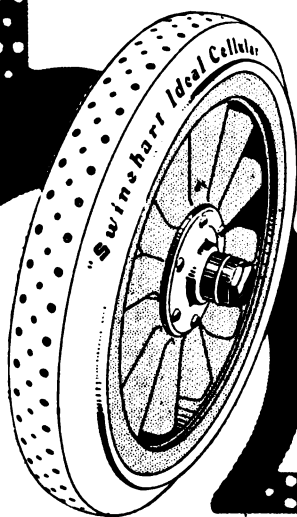
### A Non-Skid Truck Tire

is especially attractive to the Truck Tire User, as it means absolute safety on slippery pavements.

The Swinehart Ideal Cellular truck tire is not only Non-Skid, but owing to its Cellular construction and extra high tread it is semi-pneumatic. It is a cushion tire of unusual merit.

We solicit correspondence from progressive responsible dealers with a view of establishing Swinehart Service Stations in unallotted territory. Write us today.

**The Swinehart  
Tire & Rubber Co.**  
Akron Ohio



When writing advertisers please mention Motor World—it identifies you



# HALLADAY BUMPERS

**The Mark of Quality**



**Front  
Bumper  
for  
Ford Car**

The strongest and most easily attached front bumper for Ford cars



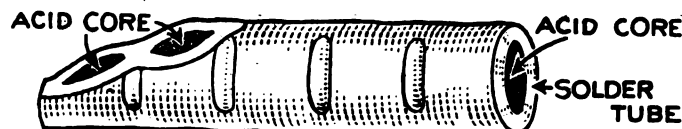
**Combination  
Rear  
Bumper  
and Tire  
Carrier  
for  
Ford Car**

Here are two Ford Bumpers of special strength and quality. Both provided with shock absorbing springs and fitted with any of the regular HALLADAY bars. The Rear Bumper is furnished with or without the Tire Carrier for one or two tires. Both are attached without cutting or altering any part of the car and secured to the frame only, neither Bumper nor Tire Carrier being in any way attached to the body.

*Sold by live dealers everywhere*

**L. P. Halladay Company**

STREATOR  
ILLINOIS



**Use only what you need!**

# KESTER ACID—CORE SOLDER

*(ready to use)*

**FOR**

Represents a big saving in material and labor. The cellular tubes eliminate waste as you use only what is needed. Kester Acid-Core Wire Solder is a big time saver, too. You don't have to prepare, handle and supply a separate soldering acid as it is within the solder and *ready to use*.

Radiator leaks, spark plug terminals, battery terminals, cracked fenders, electrical connections, carburetor and general garage use. Sold in one pound coils in cartons; on one, five and ten pound spools.



*Order From Your Jobber*

**CHICAGO SOLDER CO.**

**CHICAGO, U. S. A.**



**The Hollenden  
Cleveland**

*"Home of The Cleveland Auto Club"*

## REAL COMFORT

**C**OMFORT of guests is the primary consideration at The Hollenden. Delightful parlors, inviting, cozy corners and a definite refinement in appointments lend the congenial informal atmosphere of a private club.

### European Plan—With Bath:

For One Person  
\$2 to \$5

For Two Persons  
\$3 to \$6

With Twin Beds  
\$4 to \$6

Suites at various prices



# TWITCHELL



## ECONOMY

Every time you show a tire-user how he can get extra mileage out of his tires you not only save him money, but you help the Government in its work of winning the war. Tires and gasoline are war necessities, the less your customers use the more there will be for supply trains and army ambulances.

When a car is run on tires that are insufficiently inflated there results a tremendous waste in both tires and gasoline. Impress upon your customers the absolute necessity of keeping tires inflated to the exact pressure recommended by the tire maker. They will know when the air pressure falls short of requirements by measuring the inflation with a

**Twitchell Air Gauge,  
Price \$1.50**




**The Twitchell Gauge Co.**  
1516 S. Wabash Ave. Chicago

When writing advertisers please mention Motor World—it identifies you



## MAKE MONEY Repairing Tires

The high cost and limited supply of tires makes it necessary for motorists to conserve their tires and get maximum mileage. Present conditions offer tire repair men a big opportunity to make money. Experienced help not necessary.

With this Shaler Electric Vulcanizer you can make money easy. It heats from city electric light current—has automatic heat control—no danger of fire or explosions.

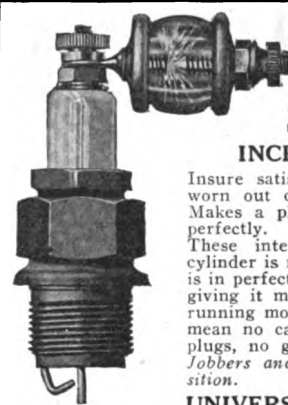
Will mend any style or size of tire—both casing and inner tube. Handles 12 casings and 200 tubes a day. Anybody can operate it, and turn out perfect work. Price \$65.00 complete—Subject to Trade Discount.

Write at once for catalog of our complete line of Shaler Vulcanizers, Steam or Electric for Repair Shops and quick selling models for motorists.

C. A. SHALER CO., 402 Fourth St., Waupun, Wis.

## SHALER

Electric  
Shop Vulcanizer



Patented 3-19-18

## UNIVERSAL AND MARVEL Spark Plug Intensifiers

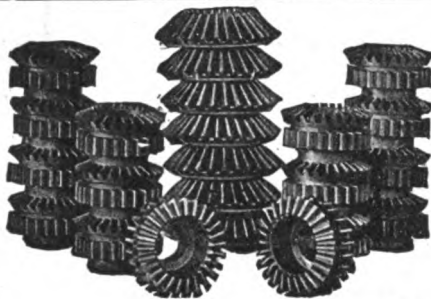
### INCREASE LIFE OF THE PLUGS

Insure satisfactory results from plugs which are worn out or on which the insulation is broken. Makes a plug fouled with grease or carbon fire perfectly.

These intensifiers indicate instantly whether a cylinder is missing and whether the ignition system is in perfect order. The spark is greatly intensified giving it more energy which produces a smoother running motor and more power. These intensifiers mean no carbon, no waste of gas, no cleaning of plugs, no guessing which cylinder is missing.

Jobbers and Dealers—Write for attractive proposition.

UNIVERSAL MFG. AND SALES CO.  
552 W. Harrison St. Chicago, U. S. A.



## GEARS

Complete differentials, gears for transmissions, spur, helical, and bevel gears for any service.

In any quantities—made to order

**NEW PROCESS  
GEAR CORPORATION**  
SYRACUSE, N. Y.

Quickly Attached to All Four Cylinder Cars, Trucks and Tractors, the

## "ALSOP-ALL-SPARK"

Ordered by U. S. War Department

Gives Two Plug  
Ignition If Desired

Saves Fuel and  
Spark Plugs.  
Gives More Speed  
and Power.  
Sparks Carbon  
Choked Plugs.  
Causes Perfect  
Combustion.  
Gives More  
Powerful Spark.  
Eliminates Car-  
bon & Vibration.



GUARANTEED FOR LIFE OF CAR

Retail price  
\$6.00

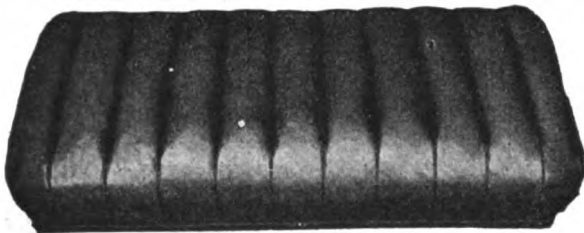
Prevents running engine with a misfire and the delays from changing spark plugs on trips. BY SIMPLY TURNING A DIAL ON DASH.

Dealers, write for a real sales proposition.

ALSOP TRIPLE IGNITION CORP., 1765 Broadway, New York

## SOLID COMFORT IN YOUR FORD

NO MATTER HOW NEW OR OLD YOUR CAR IS, YOU NEED A DOUBLE DECK DE LUXE CATHEDRAL PIPE CUSHION if you want to enjoy the comforts of a Packard or Pierce-Arrow.

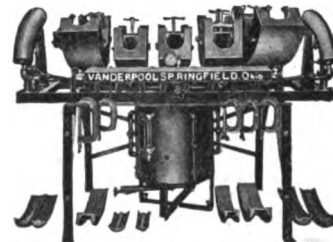


The only cushion in America that eliminates all jolts and jars, and makes all roads seem like an asphalt pavement. Made for all model Fords, as well as every other make of car at proportionately low price. A postal card will bring full information; money-back proposition if we cannot improve riding qualities of any car 100%.

AMERICAN CUSHION SPRING CO., Factory 3, Kalamazoo, Mich.

## Don't Let This Be Another "Lost Opportunity"

We urge all wide-awake, up-and-doing, ambitious men with a small savings account to go into the TIRE REPAIRING BUSINESS. Big money. We instruct you free, teach you everything—how to begin and how to advertise.



## THE VANDERPOOL VULCANIZER

5 cavity model has capacity of \$100.00 worth of work a day and repairs tires upon the CORRECT principle just as they were made at the factory. Indorsed by leading tire manufacturers. Write for full particulars, testimonials and free TIRE REPAIRING MANUAL.

In Answering Address  
Dept. K4

The Wm. Vanderpool Co., Springfield, Ohio

U.S.A.

## BABBITT AND SOLDERS

We are making prompt shipments to thousands of the largest users of Babbitt Metals and Solders with U. S. A. low-tin brands. All say "Fine; they answer every purpose." Ask us for prices in quantities, samples, and explanation of our service.

UNITED SMELTING & ALUMINUM CO., Inc.

General Office: NEW HAVEN, CT.

New York - Chicago - Pittsburgh - Detroit - St. Louis

## GEARLESS DETROIT CRANK-SHAFT TIRE PUMP

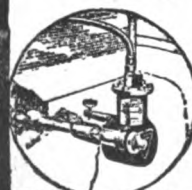
960,000 Prospects

With Cars Between \$800 and \$1300

Now ready for Brisco, Dodge, Chandler, Hudson, Overland, Reo, Hupmobile R. and Stud-baker cars. On and off in a jiffy without tools. Not a rubber diaphragm device. Write for details. Dealers, ask for discounts.

Price \$12

Detroit Accessories Corporation  
2021 Gratiot Avenue, Detroit, Mich.



When writing advertisers please mention Motor World—it identifies you



**S-M-C**  
Trade Mark Registered U. S. Pat. Off.

## Safety Made Certain

by the quick, quiet, sure action of—

### S-M-C Brake Lining

Meets every emergency; gives enduring service; does not burn; is unaffected by oil or water.

**STAYBESTOS MFG. CO.**

*The "Modern" Factory equipped to make all types of brake lining and all widths up to 6 inches.*

5536 Lena Street      Germantown, Philadelphia, Pa.

## Use Headlights That Identify Your Car

Distinctive types of electric headlights for all cars. Lights that identify your car. Built by the largest manufacturer of automobile lamps.

**The John W. Brown Mfg. Co.**  
Columbus, Ohio  
Detroit Office: Suite 411, Union Trust Building.



## "Sly" Interchangeable Rear Tire Carriers



For Ford and Chevrolet "490" tires, holds either casing alone or casing on demountable rim, has expansion grip inside of rim, avoids all contact or chafing, accommodates lamp and number plate. Has provision for locking through holes in adjusting turnbuckle. A big seller every dealer should stock.

If your jobber does not list this tire carrier, write us for complete catalog of tire carriers, "Better" Springs, and "Better" Bumpers.

**NEW ERA SPRING & SPECIALTY COMPANY**  
1179 Hamilton Avenue      GRAND RAPIDS, MICHIGAN

## BRUNNER

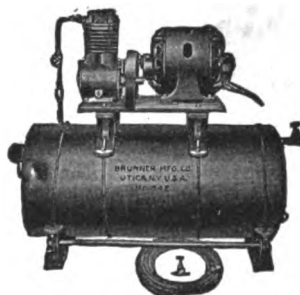
### GARAGE AIR COMPRESSORS

HAVE BEEN MAKING GOOD IN THE GARAGE EVER SINCE THE GARAGE BUSINESS HAS BEEN A BUSINESS—

BRUNNERIZE YOUR GARAGE

*Write for No. 15 Catalog and name of Brunner jobber covering your town.*

**BRUNNER MFG. CO.**  
UTICA      N. Y.

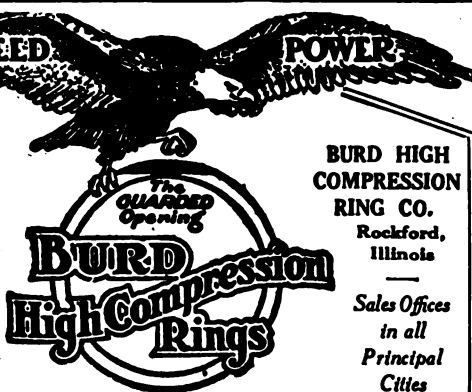


**SPEED POWER**

Standard Equipment on  
Packard  
Marmon  
National  
Haynes  
Kissel  
Pathfinder  
Etc.

**BURD HIGH COMPRESSION RING CO.**  
Rockford, Illinois  
Sales Offices in all Principal Cities

**BURD High Compression Rings**  
The Quickest Opening



Stronger than any other wire wheel

Five times stronger than wooden wheels



Stronger (4-ply) Web—Stronger Hub Cap—Special Safety Lock

**PASCO WIRE WHEELS**

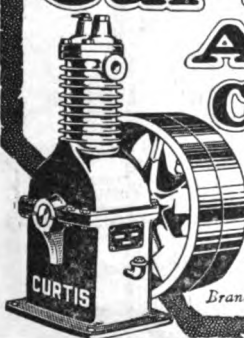
**NATIONAL WIRE WHEEL WORKS, Inc.**  
Geneva, N. Y., U. S. A.

## Curtis Air Compressors

**FREE CURTIS-AIR FREE FROM OIL**

Install a Curtis and furnish your patrons with CURTIS AIR—FREE FROM OIL. The Curtis sign (free with each Curtis Compressor) inspires confidence and helps build your business. Ask your jobber or write us for full information.


**Curtis Pneumatic Machinery Co.**  
1545 Kienlen Ave., St. Louis, Mo.  
Branch Office—531-B Hudson Terminal, New York City



## Strom BEARINGS

**U. S. BALL BEARING MFG. CO.**  
Palmer St. and  
Kohmar Avenue  
CHICAGO - - - ILL.  
U. S. A.

*Conrad Patent Licensee*



When writing advertisers please mention Motor World—it identifies you

**"DEFIES TIME AND THE ELEMENTS"**

**CHASE**  
**DREDNAUT**  
Motor  
Topping

Write for Samples and Particulars

**L. C. CHASE & CO., BOSTON**

New York San Francisco Detroit Chicago

**MARMON 34**

*Advanced Engineering*

- a half ton lighter, yet unexcelled roadability and riding ease,
- wide deep seats, yet exceptionally low bodies,
- great speed and power, yet small fuel and tire consumption.

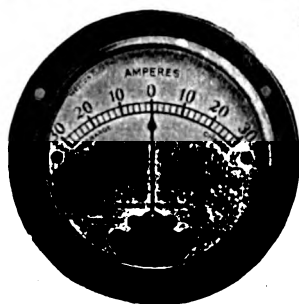
**NORDYKE & MARMON COMPANY**

Established 1851  
INDIANAPOLIS, IND.

(587)

**Reduce the Risk of Accident!**

Suppose your lights went out suddenly, without warning, on a black night, with a bad road. Don't chance it. Put a

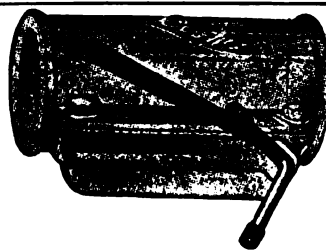


**Weston**  
MODEL 354 AMMETER

*On Your Dashboard or Cowl*

It is the reliable means of determining the proper rate of charge or discharge of your battery for various speeds. It enables you to determine that the generator is working and that the storage battery is receiving its proper charge. Write us.

Weston Electrical Instrument Co.  
40 Weston Ave., Newark, N. J.  
23 Branch Offices in the Larger Cities



**COOPER**  
**"SPECIAL"**  
**CUT-OUT**

**"COVERS THE ROAD WITH A ROAR"**

- The slanted flapper and large exhaust opening prevent back pressure.
- The exhaust pipe is not cut in two to accommodate this cut-out.
- The flapper is opened three inches by pushing the foot pedal down one-half inch.
- The lock on the foot pedal works instantly and never fails.

**COOPER MFG. CO., Marshalltown, Iowa**  
Exclusive Sales Representative: THE FULTON COMPANY, Milwaukee, Wisconsin

**THE**  
**SIoux**  
**WAY**

Tools are the best on the market for

**Re-facing — Re-seating — Grinding**  
any and all valves

**Demand the Best—the "Sioux"**

All good jobbers sell them

*Circular matter sent on request*

**ALBERTSON & COMPANY, Mfrs., Sioux City, Ia.**

**STORM** Cylinder Reboring Machines

are simple, speedy, accurate and reliable for hand or power. Adjustable for different sizes and are made in varied capacities to suit your requirements.

Also special machines for Ford and Dodge. No shop complete without one. In daily use in United States and Foreign Countries.

We also manufacture the Storm Connecting Rod Bearing Reamer, Jig and Straightening Gauge, Valve Port Renewing Tool, Piston Vises, special pistons, etc.

For sale by leading Jobbers' everywhere. Write for complete catalog.

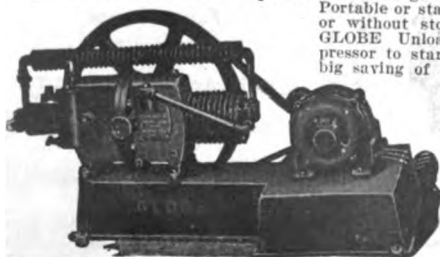
**STORM MFG. CO.**

426-27 W Street Thompson, Iowa



**GLOBE Air Compressors**  
**Popularize Air Service for Profits**

—because experience has proved to motorists that improved equipment insuring perfect air service indicates improved equipment and perfect service in other departments in the same garage. Your air compressor —if it is a GLOBE, that never fails—can bring in business that pays for it fast, and results in profits that are big.



Portable or stationary equipment, with or without storage tanks and motor. GLOBE Unloader permits the compressor to start without any load. A big saving of money, time and labor.

Write for free illustrated literature. Let us show you that GLOBE Equipment pays.

**GLOBE**  
Manufacturing Co.  
Battle Creek, Dept. B  
Michigan

**ATWATER**  
**KENT**  
**SCIENTIFIC IGNITION**  
ADDRESS ALL COMMUNICATIONS TO  
4940 STENTON AVE. PHILADELPHIA.

When writing advertisers please mention Motor World—it identifies you



THE SIGN OF SERVICE

## Ball Bearings Remade

IMMEDIATE EXCHANGE ON ALL  
TYPES AND SIZES  
DISTRIBUTORS OF HESS BRIGHT NEW BEARINGS

*Special Bearings To Your Order*

### AHLBERG BEARING COMPANY

3636 Michigan Avenue

Chicago, Ill.

#### BRANCHES

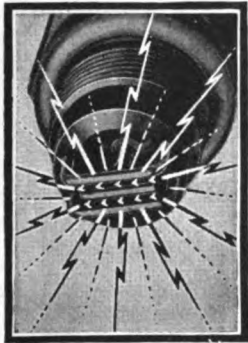
Atlanta, Boston, Cleveland, Detroit,  
Los Angeles, Minneapolis, New York, Philadelphia,  
Portland, Ore., San Francisco, St. Louis.

## Edward A. Cassidy Co.

A SELLING CORPORATION

Madison Avenue and Fortieth Street  
New York City

CONAPHORE—KIMBALL AUTO JACK  
G-P MUFFLER CUT-OUT—LONG HORN  
ECCOLENE—RAJAH SPARK PLUGS



## National SPARK PLUGS

Are Unequaled for Heavy  
Duty and Continuous Service

**10 Hot, Fat Sparks**  
*Insure Positive Ignition*

Complete Combustion—more  
power and great fuel economy

**Price \$1 at all dealers—Write for Booklet**  
BERGIE NATIONAL SPARK PLUG COMPANY  
210 E. State Street, Rockford, Illinois

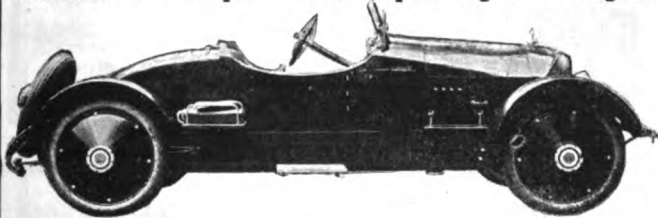


## UNIVERSAL RADIATOR SHUTTER

Makes winter driving practical because it enables you to control the flow of air through radiator from driving seat. No curtain to roll up or down. Permits closest carburetor adjustment, no matter how cold. You can warm up your motor when you start, simply by closing up the shutter. Saves gas and oil. Easily put on in thirty minutes' time. Sold by five dealers. Ford size \$7.50; other cars, \$9.00 up. Write for descriptive circular.

**Metal Auto Parts Co.** 626-628 East Locust St. Des Moines, Iowa

Speedster — Coupé — Four passenger — Brougham



## Schutte SPECIAL BODIES

Built to Fit Any Make of Car.  
Disc Wheel Inclosures — For  
any wood or wire wheel.

CHARLES SCHUTTE BODY CO., LANCASTER, PA.



## Chevrolet Uses SCHAAP PISTON RINGS

Louis Chevrolet  
Winner of the June 22 Chicago  
Speedway Race  
Schaap Rings in his Motor

And so does Darie Resto,  
Ralph Mulford, Tommy Mil-  
ton, Gil Anderson, the Har-  
ness Delage Cars, Barney  
Oldfield, Eddie Hearne, Ira  
Vail and other racing drivers.

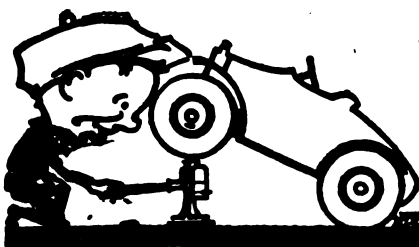
\$1.00 up to 4" — \$1.25 to 4 1/4" —  
\$1.50 to 5 1/4"

### SCHAAP AUTOMOBILE COMPANY

244 CUMBERLAND STREET,

BROOKLYN, N. Y.

**Easily put in place;  
easily worked when there.**



**"THE EASY LIFTER"**

Smooth — sure —  
quick-acting.

You'll like the

## Hartford AUTO JACK

Its army of users say  
it's

**"The Best Jack  
Money Can Buy"**

Edward V. Hartford, Inc.  
142 Morgan Street  
JERSEY CITY, N. J.



Installation of a New Stromberg Carburetor on your car will "kill two motoring evils with one stone"—excessive fuel costs and lack of full, quick speed development.

The many world speed, acceleration, easy starting and power records captured by the New Stromberg Carburetor prove it best on any car for ordinary or most exhaustive road "trials." Send the name, model and year of your car for money-saving, mile-making information.

**STROMBERG MOTOR DEVICES CO.**  
Dept. 28 64 E. 25th St., Chicago, Ill.

New STROMBERG Does it!  
CARBURETOR

## \$5 The VICTOR HEATER for FORDS

*The Best Winter Seller*

FOREIGN & DOMESTIC AUTO SUPPLY CO.  
1765 BROADWAY, NEW YORK



## Blake Insulated Staples

—give perfect protection to wire insulation  
—can be driven over two or more wires  
without danger—double thickness insulation  
over staple head protects from leaks, rust  
and corrosion.

*Easily driven.*

Manufactured and for sale by

BLAKE SIGNAL & MFG. CO., 251 Causeway St., Boston, Mass.



## DETROIT UNIVERSAL TRUCK ATTACHMENTS

Made in Capacities of from 1½ to 3-tons

Prices \$400 to \$675

CARRIER MOTOR TRUCK COMPANY  
1685 GRATIOT AVENUE, DETROIT

## Cleveland Tractor

Offers an almost unlimited opportunity for dealers

*Write for catalog and dealer proposition*

The Cleveland Tractor Co., Cleveland, O., U.S.A.

## TRY IT FOR TEN DAYS! AT OUR RISK BEACH RIM TOOL

Ask your Dealer for it. Fits all cross-split demountable rims, surely  
and quickly removes them. Just try it!

*Jobbers and Dealers:* Get our proposition.

We also make the BEACH AUTOMATIC GRIP WHEEL AND GEAR  
PULLER.

THE GREB CO., 298 State St., BOSTON

## A Necessity in Every Repair Shop and Service Station

**The Campbell Bearing Puller**

The only combination tool on the market acting as Bearing Puller and  
RACE EXTRACTOR, adjustable to different sized bearings and used for  
pulling Magneto and Electrical Generator Bearings and other bearings of  
similar type. Used by best mechanics—approved by magneto companies.  
Sent to responsible garages and service stations on MONEY BACK  
GUARANTEE. Bearing Puller, \$10. Bearing Puller with race extractor,  
\$15, F.O.B. Stockton. Illustrated booklet free on request.

CAMPBELL AUTO WORKS

238-240 N. Eldorado Street Stockton, California

## L A Young Industries, Inc.

Power Implements  
for the Farm

Detroit  
Michigan

## Firestone Tire Accessories

Every motorist should carry  
these emergency tire conservers.  
Keep your stock complete.

FIRESTONE TIRE & RUBBER CO.  
Firestone Park AKRON, O.



## CREW LEVICK QUALITY OILS and GREASES

CREW LEVICK CO., 105 N. Broad St., Philadelphia, U. S. A.

They are derived from pure  
Pennsylvania Crude. Refined  
by our own refinery and  
guaranteed of uniform excel-  
lence. Sold in sealed cans, ½  
barrels and barrels.

*Write for Prices, etc.*

## Willard STORAGE BATTERY SERVICE STATION

## Look for This Sign

It's a mark of the  
service to which every  
Willard user is entitled.  
*Willard Service*

## ANTHONY TIRE PUMP

The ANTHONY CO., Long Island City, N.Y.

## Plunkett Shock Absorber For Ford Trucks

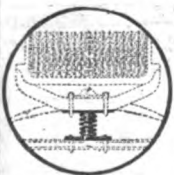
(A shock absorber and rebound snubber in one)

Absorbs shocks, prevents broken springs, re-  
bounds and sideways and is a front spring sup-  
port. Strong and simple. Easily installed.

Retail Price, \$6.50

Send for our Dealer Proposition

Plunkett Shock Absorber Co., Inc.  
Brooklyn, N. Y.



## MOTOR WORLD

*"The Paper That Is Read, Not Merely Looked At"*

It ought to be a regular weekly visitor in your office,  
Mr. Dealer. \$2.00 per year—a small price for a big value.  
Subscribe today.

Motor World Publishing Co., 231-241 W. 39th St., N. Y.

## BELL MOTOR CAR

*4 Cyl Model - 114" Wheel Base*

**\$1150.00 F.O.B. FACTORY**

BELL MOTOR CAR CO., YORK & P. A.

## FRAMES PARISH & BINGHAM

CLEVELAND

OHIO

HOLMES Pat. Nov. 10, 1914.

When you bring in a  
wrecked car you need  
this Truck.

## Wrecking Truck

In a moment you raise the car with this lever, then  
strap the Tongue in place, and away you go. Hundreds  
of garages are now equipped, and the way they bring in  
their customers is a great surprise. One truck for front  
or rear. Let us send you our literature. You need it.

ROBERT HOLMES & BROS., Danville, Illinois





**2 Ton  
Capacity**



**OSHKOSH 4-Wheel-Drive TRUCK**

includes as standard equipment, Goodyear Cord, 36x6 Pneumatic tires, truck type — Electric Lighting and Starting.

OSHKOSH MOTOR TRUCK MFG. CO., OSHKOSH, WISCONSIN

## Just Think What It Means

to be able to repair a broken water jacket without dismantling, and with full assurance that the repair will be perfect, without the necessity of pre-heating and no danger of warping the bore or changing the alignment.

### PETERS NICO SPELTER and FLUX

allows you to do this. About 300 deg. heat is all that is required to melt this compound and cause it to adhere to the cast iron, bronze or brass piece which is to be repaired. Although the melting point is so low the braze is a perfect one and will permanently repair a broken water jacket or any machine casting requiring a filler. The big advantage is that no preheating is required with consequent danger of cracking, distorting and warping.

Write for full particulars concerning this remarkable compound.  
Sole Sales Agents for the Famous Peters Aluminum Brazing Solder.

### ALUMINUM BRAZING SOLDER CO.

Montgomery Building

Chester, Pa.

# COLLIER

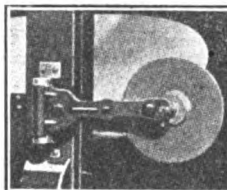
## TRUCKS

Every part and feature of construction has been coordinated to the single purpose of making this truck a rapid and efficient worker with a wide range of adaptability. It is perfectly suited to the hurry up Special Delivery or the transportation of good sized load with extraordinary dispatch.

The Collier Motor Truck Co.  
Bellevue, Ohio

**1 1/2 TON**  
**SPEED**  
**TRUCK**  
Pneumatic  
Tires

# Hindview



Style C — For Cabriolet, Brougham, Coupe, Sedan and Limousine Bodies

### AUTO MIRRORS

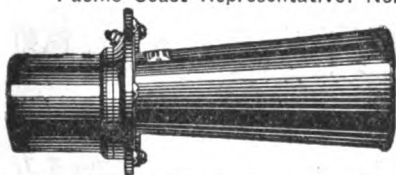
With the Patent Apl'd For Ball Joint permit immediate adjustment to any angle without use of any tool. A style for every car. Big sellers. Jobbers. Dealers send for illustrated catalog and proposition.

KALES STAMPING CO.  
449 Lafayette Blvd. Detroit

## SPARTON PRODUCTS

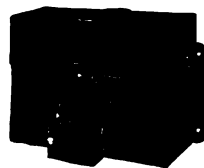
### First Choice of America's Best Cars

Sparton Motorhorns—hand-operated and motor-driven.  
Sparton Gasoline Vacuum System.  
Sparton Honeycomb Radiators and Sparton Radiator Fans.  
The Sparks-Withington Co., Jackson, Mich., U. S. A.  
Pacific Coast Representative: Norman Cowan Co., San Francisco, Cal.



## THE DEFENDER

Is the "Standard" Ford Ignition Lock. Always demand the Defender, and take no imitations. The Defender safely locks the coil box, and is the lock that grounds the electrical system; this makes the car thief-proof. Many Insurance Companies require the Defender and allow 15% off on Insurance, when the Defender lock is used.



Sells for \$4.00  
Worth the price of car.

### Defender Auto-Lock Co.

5th Floor Marquette Bldg.  
DETROIT MICH.

### Necessity Chain Tool

ANTI-SKID chains are scarce—they've been likened to "chains of gold." So thousands of chains must be repaired. You will need a Necessity—it opens and closes links quickly—no slipping. A genuine drop forging. Costs more than a casting—but worth it! List, \$1.60.

STEVENS & COMPANY  
375 Broadway New York



STEVENS PRODUCTS

# ZENITH

## CARBURETOR

IN  
WAR  
IN  
PEACE

EVERY Liberty Aircraft Engine built is equipped with Zenith Liberty Carburetors—the reason is clear to Zenith users.

**Zenith Carburetor Co.**  
New York DETROIT Chicago



# Raybestos

## BRAKE LINING

**Guaranteed for One Year**  
THE RAYBESTOS CO., Bridgeport, Conn.

# PERMASEAL

The MASTERPIECE of Piston Ring Construction  
Gives "Pep" to Lazy Motors

GRUNDY MANUFACTURING CORPORATION  
518-20-22 West 57th Street New York City



**Best Selling Accessory  
on the Market**

The Roedding Safety rear-end automotive signal is the most wonderful automatic signal device ever perfected. Car and truck owners buy at first demonstration. Write for our attractive dealers' proposition.

K. G. BARKOOT,

1010 Chamber of Commerce Bldg.,  
Detroit, Mich.

## American Chain Company, Inc.

Bridgeport  Connecticut

Manufacturers of Weed Tire Chains, Weed Chain-Jacks,  
Dobbins Blow-Out Chains, Campbell Cotter Pins, Towing  
Chains, Tire Lock Chains, etc.

## Increasing Profits for Dealers



Write at once  
for full particulars.

Trailers are rapidly increasing the business of Dealers handling them. They bring good profits and are easy to sell. They **HELP YOUR OTHER BUSINESS!** Write for facts concerning this. The Trailer Business is booming.

**THE OHIO TRAILER CO.**  
58 Oakview Road, Cleveland, O.

The Motor Truck bought today without Electric Starting and Lighting will be out of date to-morrow

# BETHLEHEM

Internal Gear Drive  
**MOTOR TRUCKS**  
Dependable Delivery

BETHLEHEM MOTORS CORP'N. ALLENTOWN, PA.

The Motor Truck bought today without Electric Starting and Lighting will be out of date to-morrow

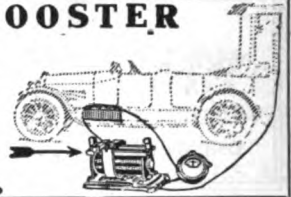
Read Gredag  
advertisements

## F-F BATTERY BOOSTER

EVERY MOTORIST A PROSPECT

These high grade rectifiers for charging storage batteries with A.C. current are showing constantly increasing sales. Write us for circular No. 13, prices and dealer discounts.

They give absolute satisfaction to your customers. Their moderate price (\$24 up, with ammeter) insures ready sales.



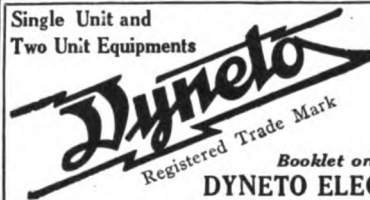
THE FRANCE MFG. CO., Cleveland, Ohio

**THE LAIDLAW CO., Inc.**  
16 W. 60th Street New York City

## Automobile Fabrics

A Fabric for Every Purpose for Open, Closed and Convertible Bodies

Single Unit and  
Two Unit Equipments



**ELECTRIC  
STARTING  
and LIGHTING  
SYSTEMS**

Booklet on Special Ford Equipment  
**DYNETO ELECTRIC CO., Syracuse, N. Y.**



GET INTO THE TRACTOR  
BUSINESS

*The War Is Over*

Turn your old car into money; makes an economical 4-plow BIG-AUTO TRACTOR. We show how. This business will boom from now on—a money maker.

**WRITE TODAY**

# SUNDERMAN

## Vacuum Carburetor

SUNDERMAN CORPORATION, 9 Chambers St., Newburgh, N. Y.

**Fits Any  
Shape**

Strip of cold rolled ribbon steel conforms to any shape hose. Fits perfectly.



**You Only Have to Carry One Size!**

Every Garageman seeing this clamp has bought it. Fits all sizes up to 3". By attaching one to another you can fit any size—a 6-foot diameter if necessary. Ask your jobber or write us direct.

Universal Industrial Corporation  
Hackensack, New Jersey

**UNIVERSAL HOSE CLAMP**

**Willard**  
STORAGE BATTERY  
SERVICE STATION

**Look for This Sign**

It's a mark of the service to which every Willard user is entitled.

*Willard Service*

USED ON 90% OF ALL FULLY EQUIPPED CARS

# KELLOGG

ENGINE DRIVEN  
**Tire Pump**

KELLOGG MANUFACTURING CO. ROCHESTER, N.Y.

# GOODELL PRATT

**1500 GOOD TOOLS**

Goodell-Pratt  
Company

*Toolsmiths*

Greenfield, Mass., U. S. A.

# THE CLEARING HOUSE

## OF THE MOTOR INDUSTRY

*For Parts, Accessories, Tires, Machinery, Rebuilding, Repairing, Welding and Used Cars. Also Help and Situations Wanted and Miscellaneous Classified Advertising.*

# "We Tear 'Em Up and Sell the Pieces"

This slogan has built one of the world's largest used parts business. Tens of thousands of owners and garagemen have used our parts. This week we have:

<b>MOTORS</b> Send for list \$30.00-\$150.00	<b>BEARINGS</b> Any style or kind 50c.-\$5.00	<b>DIFFERENTIALS</b> \$10.00-\$30.00	<b>DIFFERENTIAL GEARS</b> 50c.-\$1.50
<b>UNIT POWER PLANTS</b> Send for list \$75.00-\$300.00	<b>SPRINGS</b> \$2.00-\$4.00	<b>AXLE SHAFTS</b> \$1.50-\$7.50	<b>JACKS</b> \$1.00-\$2.75
<b>REAR AXLES</b> \$25.00-\$75.00	<b>SPRING LEVER</b> 25c.-50c.	<b>RING GEARS</b> \$1.00-\$30.00	<b>GASOLINE TANKS</b> \$2.00-\$7.50
<b>FRONT AXLES</b> \$5.00-\$15.00	<b>TUBE VULCANIZING</b> 50c.	<b>TRANSMISSION GEARS</b> 50c.-\$20.00	<b>PRESTO TANKS</b> \$5.00-\$8.00
<b>RADIATORS</b> \$10.00-\$30.00	<b>RIMS</b> \$2.00-\$3.00	<b>SPOT LIGHTS</b> \$3.50	<b>SEARCHLIGHT TANKS</b> \$2.00-\$3.00
<b>WHEELS</b> \$2.00-\$7.50	<b>FELLOE BANDS</b> \$1.00-\$1.50	<b>SPARK PLUGS</b> 25c.-75c.	<b>COLD PATCHES</b> 10c. Dozen
<b>STARTERS</b> \$15.00-\$30.00	<b>CRANKCASES</b> \$10.00-\$50.00	<b>RELINERS</b> 2 1/2 x 3-30 x 3 75c.-\$1.00	<b>METAL POLISH</b> 10c.-15c.-25c.
<b>GENERATORS</b> \$12.50-\$30.00	<b>CYLINDERS</b> \$5.00-\$30.00	<b>TRANSMISSION CASES</b> \$7.50-\$25.00	<b>TIN COVERS</b> 50c.
<b>WINDSHIELDS</b> \$5.00-\$10.00	<b>CRANK SHAFTS</b> \$1.50-\$30.00	<b>INSIDE PATCHES</b> 3-3/4-4-4 1/2-5 20c.-35c.	<b>SEAT COVERS</b> \$3.50 Set
<b>LAMPS</b> \$3.00-\$8.00	<b>CONNECTING RODS</b> \$1.50-\$5.00	<b>LACE OUTSIDE PATCH</b> 3-3/4-4-4 1/2-5 25c.-50c.	<b>TOP COVERS</b> \$1.50
	<b>PISTONS</b> \$1.00-\$3.00	<b>HOOK ON HOOTS</b> 3-3/4-4-4 1/2-5 25c.-50c.	<b>TRANSMISSION</b> \$25.00-\$50.00
			<b>CARBURETOR</b> \$3.00-\$15.00

**Highest Banking  
References  
Are Behind Our  
Guarantee  
of Satisfaction  
or Money  
Cheerfully  
Refunded**

# AUTO WRECKING COMPANY,

13th and Oak  
Kansas City, Mo.

# 3 REASONS!

## WHY YOU SHOULD BUY USED PARTS FROM US

### Reason No. 1

Our position as the world's largest used parts concern permits us to select from the used car market a stock of parts that are unequalled for high quality and long life. The parts you order from us are covered by a money back guarantee. This then is Reason No. 1.

*Auto Salvage  
Bulletin No. 23*

### Reason No. 2

Our stock is made up of parts from over 600 models and 110 makes of cars. We can assure you 24 hour service on your parts. All orders are shipped the same day as received. Our unmatched service is Reason No. 2 why you should do business with us.

### Reason No. 3

Our volume of business is so large that we can afford to quote you prices that will leave no doubt in your mind as to the advisability of placing your orders with us. Ask us our prices on any parts that you may need. Compare these prices with those on other parts of the same high quality and remember that each and every part is absolutely guaranteed to give satisfactory service. Reason No. 3, then, is lower prices.

**WATCH NEXT  
WEEK FOR  
BULLETIN No. 24**

# AUTO SALVAGE COMPANY, Inc.

1701-03 Main Street  
KANSAS CITY, MISSOURI

HOME OFFICE  
2823-25 Locust Street  
ST. LOUIS, MISSOURI

314 E. Third Street  
CINCINNATI, OHIO

*"The World's Largest Used Parts Concern"*

Parts and Repairs

Parts and Repairs

Parts and Repairs

# New Motors and Auto Truck Parts

Six 35 H.P. NEW Continental Engines complete with self starter, also other NEW 1½ ton auto truck parts including springs, frames, complete axles and transmissions, etc.

**DRIGGS ORDANCE COMPANY, Inc.**

2605 Equitable Bldg.

New York, N. Y.

## CONTINENTAL MOTOR REPAIR PARTS

For All Models Carried in Stock

QUAKER CITY MOTOR PARTS CO.

Richmond and Tioga Sts.

Dept. "C"

PHILADELPHIA, PA.

## FORD SPEED SPECIALTIES

UNDERSLUNG PARTS FOR FORDS, complete with instruction, per set, \$20.00. Counter-balances for the Ford crankshaft, per set, \$12.00. Speedway Type Racing bodies, \$129.50. 3 to 1 gears, 2½ to 1, set \$15.00.  
**CRAIG-HUNT, Inc.**  
835 Lemcke Building Indianapolis, Ind.

## GUARANTEED USED PARTS

½ to ¼ LIST PRICES

Packard 30—6-48—6-38, Pierce 4 and 6 cyl., Peerless 4 and 6 cyl., Cadillac '09 to '14, Marmon '09 to '12, Locomobile 4 and 6 cyl., Buick, Chalmers and 100 others. Bosch magnetos \$15 up. Bosch 2-spark magnetos, \$75 up. Gray & Davis starting and lighting motors, batteries, coils, carburetors, bearings. Large Klaxon horns \$12.50 (slightly used). All our goods guaranteed. Your money's worth or your money back.

**E. W. SAUNDERS**

27 Stanhope St.,

BOSTON, MASS.

## AUTO SAVE 50-90% PARTS FOR 400 CARS

POPE, PACKARDS, PIERCE, KNOX, ETC.

Motors .....	\$25.00 up	Presto Tanks....	\$4.50 up
Magnetos .....	4.00 "	New Spotlights. 2.00 "	
Carburetors .....	3.00 "	Generators .....	10.00 "
Rear Axles.....	15.00 "	Gears .....	1.00 "
Front Axles.....	5.00 "	Bearings .....	1.00 "
Cylinders .....	5.00 "	Radiators .....	10.00 "

Jobbers in Bankrupt Auto Supplies

**BRIGHTMAN AUTO EXCHANGE**

84 Wooster St., Hartford, Conn.

## RIMS

## RIMS

All Makes and Kinds

Parts, Side and Lock Rings, Bolts and Wedges. Dealers write for prices.

**CITY AUTO TIRE & SUPPLY CO.**

1845 East 24th St.  
Cleveland, O.

## PARTS

For Practically All Makes of Cars. 60 per cent. to 85 per cent. off list price. Send in your old parts for duplication. Write us your needs and get our price before buying elsewhere. Prompt Service.

**INDIANA AUTO PARTS CO.**

448 So. Meridian St.

INDIANAPOLIS, IND.

## A REAL COMBINATION!

# UNEXCELLED MERCHANDISE and SERVICE

If We Cannot Satisfy You Money Cheerfully Refunded  
Good, Serviceable Parts for All Cars.

### Special Motor Bargains

All in excellent condition  
National 4 cyl. 1912-13.....\$125.00  
Marmon 4 cyl.....100.00  
Stoddard-Dayton Knight 6 cyl.....250.00  
E. M. F.....65.00  
Premier 6 cyl.....100.00  
Thomas 6 cyl.....125.00  
Humber 4 cyl.....85.00  
Packard 30, 1911.....100.00  
Garford 11.....100.00  
Reading 40, 4 cyl.....100.00  
Everett 6 cyl.....90.00  
Pierce-Arrow 6 cyl. Mod. 38.....100.00  
Huda 1914.....100.00  
Studebaker 4 cyl.....85.00  
Studebaker 6 cyl.....100.00  
Renault 4 cyl.....100.00  
Regal Block.....85.00  
Mitchell 4 cyl.....100.00  
Mitchell 6 cyl. T-head type.....125.00  
Cadillac 1910-11.....85.00  
Cadillac 1912-13.....100.00  
Maxwell 25.....100.00  
Tetter 6 cyl., with starter.....150.00

### UNIT POWER PLANTS

King 8 cyl., 1916.....\$200.00  
Continental Model E.....125.00  
Cole 6 cyl.....150.00  
Cole 4 cyl. Model 30.....80.00  
Cole 4 cyl. Model 40.....100.00  
Chalmers Master 6 cyl.....150.00  
Chalmers 30.....85.00  
Stevens-Duryea 6 cyl. Mod. Y.....150.00  
Hudson 54.....150.00  
Hudson 37 4 cyl.....125.00  
Lover 1915.....125.00  
Milwaukee 4 cyl.....125.00

### SPECIAL

NEW Burd Leak Proof Piston  
Rings, and other makes.  
Size 3x3/16 and 3x3/16...25c. each

50 New Adjustable T Bumpers, nickel or black, fit all cars except Fords, \$4.50 each.  
14,000 ft. New Radiator Hose, price, per ft.: 1", 15c.; 1¼", 20c.; 1½", 25c.

Mail Orders Shipped Same Day

Highest Prices Paid for Wrecked Cars

**WARSHAWSKY & CO., Largest Car Wreckers in the West**

Phone Calumet 7315

1915 S. State St., CHICAGO, ILL.

### NEW Sun 6 cyl., U. P. Motors

only.....\$100.00  
NEW Rambler Motors.....65.00  
Liberal allowance made on your old

Cylinder Blocks, Pistons, Shafts, etc.,  
for most all motors

### MAGNETOS

Overhauled and Guaranteed  
DU4 Bosch Set Spark.....\$30.00  
DU4 Bosch Variable Spark.....25.00  
DU6 Bosch.....27.50  
DR4 Bosch.....20.00  
DR4 Two Spark.....55.00  
DR6 Bosch.....25.00  
D4 Bosch.....15.00  
D6 Bosch.....17.50  
D6 Bosch Two Spark.....45.00  
NU4 Bosch.....15.00  
ZR4 Bosch.....35.00  
Eisemann Dual.....15.00  
Remy Model RL & D.....7.00  
Dixie Magn.....12.00  
Simms H. T.....12.00  
Mea.....10.00  
We carry in stock all magneto parts

### GENERATORS

Gray & Davis.....\$15.00  
Ward Leonard.....12.00  
Remy.....18.00  
NU4 Bosch.....12.00  
Beardon.....12.00  
Apple.....10.00  
New Westinghouse, 209-R, 6  
volts.....20.00

### COILS

Bosch Type A.....\$7.00  
Eisemann.....4.00  
Spiltdorf.....4.00  
Silent Starter and Generator Chains;  
all lengths and sizes.

### NEW HEADLIGHTS

Gray & Davis 12-in. face, two  
bulb type.....\$5.00  
Special 12-in. face, two bulb  
type.....4.00  
New steering posts.....5.00

### SECOND-HAND CAR DEPT.

\$150.00 to \$550.00

50 to 75 exceptionally good used cars  
at prices so low that they would even  
interest dealers.

### TIRES AND TUBES

We wreck many cars every day and  
thus obtain great quantities of ex-  
ceptionally good Tires and Tubes at  
prices that will interest you.

Rims .....	\$1.50 to \$2.50
New Steering Posts.....	5.00
Front Axles .....	5.00 to 10.00
Rear Axles .....	15.00 to 40.00
Radiators .....	10.00 to 35.00
Transmissions .....	15.00 to 100.00
Carburetors .....	5.00 to 9.00
Bearings .....	.50 to 3.50
Springs .....	1.00 to 3.50
Transmission Gears.....	1.00 to 5.00
Differential Gears.....	5.00 to 10.00
Axle Shafts .....	2.00 to 8.00
Gasoline Tanks .....	1.00 to 5.00
Lamps .....	.50 to 5.00
Winchfields .....	8.00
Spotlights .....	3.50 to 5.00
Stewart Vacuum Tanks.....	4.00
Carter Tanks .....	2.50
B-Presto Tanks .....	5.00
E-Presto Tanks .....	4.00
Searchlight .....	3.00

## SAMUEL L. WINTERNITZ & CO.

## AUCTIONEERS

Largest Liquidators of Motor Plants

First National Bank Building Chicago, Ill.

## Ford Rear Commercial Fenders

Special opportunity to secure these for  
quick delivery. Complete line of delivery car  
and body builders' supplies. Write imme-  
diately.

**H. HETT & SON**

238 E. 118th Street, New York City

## GEARS

FOR TRANSMISSION & DIFFERENTIALS  
SHAFTS & PINS

**SERVICE GEAR & MACHINE CO.**

"Manufacturers for the Trade"  
WEST READING, PA.

## PARTS FOR ALL CARS

at a saving of 50 to  
80%. Write us your needs.

**MOTOR SALVAGE CO.**

1425 S. State Street Chicago, Ill.

## WICHITA AUTO WRECKING CO

805-809 W. Douglas St. Wichita, Kan.  
We can save you money on Parts for Stand-  
ard and Orphan Cars

—Seven Years in the Business—  
See our ad in Motor Age

*Parts and Repairs  
Rebuilding and Repairing*

**Wanted Obsolete Stocks  
DELCO MATERIAL**  
and  
**Ball Roller Thrust and Plain Bearings**  
Any quantity for cash.  
**M. George Tigar Bearings Co., Inc.**  
16 W. 62nd St., NEW YORK, N. Y.  
Telephone Columbus 421-422-423

**BRAZING and WELDING—REPAIR WORK**  
Bring us your brazing and welding. We work in all metals and can turn out this class of work in a rush. Phone or call at our plant.  
**THE PURITAN MACHINE COMPANY**  
152 PURITAN BLDG.  
10th and Lafayette DETROIT, MICHIGAN  
Eastern Branch: 245 W. 55th St., New York City.

**ATTENTION! MARION OWNERS**  
All Parts for All Models  
Save Money—Buy your Transmission, Differential, Rear Axle and Motor Parts from us. Liberal discount allowed on all parts.  
**MARION MOTOR CAR CO. OF CHICAGO**  
2450 Michigan Avenue Chicago, Ill.

**FREE CATALOG**  
WRITE TODAY FOR OUR USED PARTS CATALOG  
It will give you full information and prices on all parts.  
**AUTO PARTS COMPANY**  
OMAHA, NEBR.

**PULLMAN PARTS**  
NEW PARTS FOR PULLMAN CARS  
A Complete Line of All Parts, at a Greater Saving!  
**PULLMAN AUTO PARTS CO.**  
Dept. P. 115 East 18th St., Kansas City, Mo.

## CYLINDERS REGROUND

Over 800 Piston Patterns

ALWAYS IN STOCK

Our Expert Mechanics and our Highest Grade Equipment are your guarantee for highest class workmanship.

*Our Special Light Alloy Pistons Will Give You More Power—More Speed.*

We also do gear cutting of Spur and Bevel Gears.

WRITE US TODAY

**AUTO ENGINE WORKS**

St. Paul, Minn.

## DON'T FORGET

WE ARE NOW IN OUR NEW QUARTERS  
Harris Ave. & Marion St.,  
Long Island City, N. Y.

## WE STILL HAVE

A New York Office for local trade at 347 West 52nd St.

**HOUPERT MACHINE CO.**

*Rebuilding and Repairing  
Tires*

## Regrind Cylinders

and Fit Pistons NOW  
**Rings and Pins**

Largest in Middle West

A record kept of every job

**BUTLER MFG. CO.**

1115 E. Georgia St., Indianapolis, Ind.

*Tires*

## Used Tires

These tires, while not guaranteed, are thoroughly renovated and repaired in any weak spot. Workmanship the best. Are offered at these low prices while they last:

30 x 3.....	\$3.50	33 x 4 1/2.....	\$9.00
30 x 3 1/2.....	4.50	34 x 4 1/2.....	7.75
32 x 3 1/2.....	5.50	35 x 4 1/2.....	8.00
31 x 4.....	6.00	36 x 4 1/2.....	8.00
32 x 4.....	6.00	37 x 4 1/2.....	8.50
33 x 4.....	7.00	35 x 5.....	10.00
34 x 4.....	7.00	36 x 5.....	10.00
35 x 4.....	7.50	37 x 5.....	10.00
36 x 4.....	7.50	38 x 5 1/2.....	12.00

Goods shipped C.O.D., subject to examination upon receipt of 20 per cent of order. 10 per cent extra for Non Skid.

**Cambria Tire Exchange**  
204 Columbus Ave., Boston, Mass.

## Cylinder Grinding

on special highest grade cylinder grinding machinery. No makeshift tools. Work handled by men with automobile factory experience. Large assortment of patterns for iron pistons. Complete stock of piston rings. Prompt service. Highest grade work only, fully guaranteed.

### Aluminite Pistons

Aluminite pistons will put six cylinder smoothness into a four cylinder motor; improve a six or eight, give more power and quicker getaway. For prices, state make, model and year. **EXPERT MOTOR BUILDING.** Piston pins, aluminite connecting rods and racing motors.

### Power-Plus Cylinder Heads for Fords

Special discount to the trade.

**Green Engineering Co., Dayton, Ohio**  
Pittsburgh Repr., James T. Shelton, 24th & Sidney Sts.

## USE USED TIRES

Our reputation is your safety. References: Dun's and Exchange Trust Co. Props., K. S. Brayton and George Valley.

30 x 3.....	\$4.95	34 x 4 1/2.....	\$15.00
30 x 3 1/2.....	6.00	35 x 4 1/2.....	13.00
32 x 3 1/2.....	7.00	36 x 4 1/2.....	13.00
32 x 4.....	9.00	35 x 5.....	13.50
33 x 4.....	9.00	37 x 5.....	14.50
34 x 4.....	10.00	38 x 5 1/2.....	15.00

We stand behind these tires. Satisfaction guaranteed.

### USED TIRE OUTLET CO.

19-A Cambria St. BOSTON, MASS.

**CRANKSHAFTS REGROUND**  
Not Filed and Lapped—But REGROUND!!  
**ON SPECIAL GRINDERS!!**  
**CYLINDERS REGROUND**  
**STAFFORD SUPREME SERVICE**  
**STAFFORD MOTOR CO.**  
2201-9 Campbell Avenue  
Kansas City, Mo.

## CYLINDER REBORING

FOR PASSENGER CARS—TRUCKS—TRACTORS  
We have the capacity and the skilled workmen. Satisfaction guaranteed. "ONCE A CUSTOMER—ALWAYS A CUSTOMER." is our motto. We are also specialists in high grade PISTONS, RINGS and PINS. Special attention given to Trucks and Tractors.

### PARK MACHINE CO.

22 West 3rd St. ST. PAUL, MINN.

## CYLINDERS REGROUND

Including new pistons and rings. Any size—\$5 to \$10 per cylinder. All our work guaranteed.

Quick Shipments.

Let us prove our ability on your next job.

### NEUPERT MFG. CO.

82 Lark St. BUFFALO, N. Y.

## TIRES AND TUBES

Slightly Used and Factory Repaired Tires and Tubes—Quality Above All

A SATISFIED CUSTOMER IS OUR BIGGEST ASSET. THEREFORE WE MUST SATISFY YOU.

Size	Tires Tubes	Size	Tires Tubes
30 x 3.....	\$4.00 \$1.25	35 x 4.....	\$8.00 \$1.75
30 x 3 1/2.....	5.00 1.45	36 x 4.....	8.00 1.75
31 x 3 1/2.....	5.25 1.50	34 x 4 1/2.....	8.25 1.75
32 x 3 1/2.....	5.50 1.50	35 x 4 1/2.....	8.50 1.80
34 x 3 1/2.....	6.00 1.60	36 x 4 1/2.....	8.75 1.85
31 x 4.....	6.25 1.65	37 x 4 1/2.....	9.25 1.90
32 x 4.....	7.00 1.90	35 x 5.....	9.50 2.00
33 x 4.....	7.75 1.70	36 x 5.....	9.50 2.00
34 x 4.....	7.75 1.70	37 x 5.....	10.00 2.20

Send \$1.00 deposit with each tire ordered. Tires will be sent promptly C. O. D., with privilege of examination. Specify style of rim to avoid delay. We will cheerfully make reasonable adjustments, but give no definite mileage guarantee.

### LINCOLN TIRE & SUPPLY CO.

1463 S. Michigan Ave. Dept. M. CHICAGO, ILLINOIS

## NEW TIRES AND TUBES \$100,000 Stock

Dealers Will Profit

By Inquiring for Their Sizes

*We Save You 50%*

**Serlin Tire Company**

1300-1302 Michigan Ave., Chicago, Ill.

## Special Bargains in SLIGHTLY USED TIRES

30 x 3.....	\$4.00	32 x 4.....	\$7.00	35 x 4 1/2.....	\$8.50
30 x 3 1/2.....	5.00	33 x 4.....	7.75	36 x 4 1/2.....	8.75
32 x 3 1/2.....	6.00	34 x 4.....	8.00	37 x 4 1/2.....	9.25
31 x 4.....	7.00	34 x 4 1/2.....	8.50	37 x 5.....	10.00

\$1.00 with each tire ordered. Bal. C. O. D. subj. to exam.

Specify Style of Rim.

No Mileage Guarantee at the Above Prices.  
**AMERICAN TIRE & VULCANIZING CO.**  
2138 S. Michigan Ave., CHICAGO, ILL.

## STANDARD MAKE NEW NON-SKID TIRES

At a Big Reduction. Save from 40% to 50% on Tires and Tubes.

SPECIAL PROPOSITION TO LIVE DEALERS

**ROYAL TIRE AND SUPPLY CO.**

1461 Michigan Ave. Phone Calumet 2553 CHICAGO

## STANDARD MAKES NEW AND USED TIRES

Write for Prices

**ARMSTRONG TIRE & VULC. CO.**

1336 Michigan Ave., Chicago, Ill.

Help Wanted  
Magneto—Service Station

Help Wanted  
Magneto—Service Station—Miscellaneous

Business Opportunities  
Patents and Patent Attorneys—Mfg. Opp.

## WANTED

### Manager of Retail Sales Department

for largest automobile distributor of popular price cars in City of about one million population in Middle West. Previous automobile experience not absolutely necessary. We do not want a job seeker nor a salesman looking for more money, but a man who has already produced real results as a director of salesmen, and who can bring into the organization originality, vision and constructive ability—an organizer and creator of sales. In replying please give your age, and in detail your experience and some information which will give us an idea of your producing ability. Address Motor, care MOTOR WORLD.

### Send it to Detroit

Official Service and Parts Representative for Atwater-Kent, Autolite, Berling, Bijur, Connecticut, Delco, Dyneto, Heinze-Springfield, K.W. Ignition, Klaxon, Remy, Simms-Magneto, Westinghouse.

COMPLETE STOCK OF  
**GENUINE PARTS**  
*All work and parts guaranteed*  
**AUTO ELECTRIC & SERVICE CORP.**

11 TO 19 SELDEN AVENUE  
PHONE: GLENDALE 3258

## WANTED

District Sales Manager, experienced as Truck Salesman and qualified to establish dealer connections. Mail your references with application. Do not telephone for appointment.

**Diamond T Motor Car Co.**  
4517 W. 26th Street Chicago

**SURPLUS STOCK**  
**GRAY AND DAVIS**  
**Generators and Armatures**

**33 1/3% Off**

*Write for Particulars*

**PELLET MAGNETO CO.**  
2453-59 So. Wabash Ave. Chicago, Ill.

### ELECTRICAL REPAIR SERVICE

We represent 8 Factories  
**Electrical Testing Co., Peoria, Ill.**

### FOR SALE

One Packard Touring Car, No. 135, 1917 model, in first-class condition, has been run only 4500 miles. For terms, address T. B. Fuller, Durham, N. C.

### IF IT'S ELECTRICAL WE CAN FIX IT

Any Starting, Lighting or Ignition System.  
**ARTHUR JONES ELECTRIC COMPANY**  
Established 1903.  
2837 South State St. CHICAGO, ILL.

### WIND SHIELD GLASS IN ALL SIZES FOR ALL CARS

*We carry a complete stock*  
**Joseph Elias & Co.,** 630 Jackson Avenue  
Long Island City, N.Y.

### MAGNETOS REPAIRED

Prompt and efficient service.  
**HEINZE STARTERS } In Stock**  
**BOSCH PARTS }**  
Send that magneto in today for repairs.  
**CARL A. ANDERSON**  
1407 Jackson St. Dept. M OMAHA, NEBRASKA

### AUTO MAILING LISTS

Send for our FREE complete circular, covering auto dealers, owners, Ford dealers, owners, truck dealers, owners; garages; repair shops; auto mfrs., etc.—any state.  
**TRADE CIRCULAR ADDRESSING CO.**  
106 W. Adams St. Franklin 1182 CHICAGO

### FOR SALE

Big Business in Portland, Oregon, \$25,000.00 cash, balance on terms to reliable party. Distributor for three best known passenger cars in America, Farm Tractor, Truck Line and Repair Shop. Business paid \$30,000.00 net 1917, probably go \$50,000.00 net 1918. Reason for selling, other business interests require my personal attention in South. Address Box A-111, care MOTOR WORLD.

### FOR SALE

#### 11 KELLY-SPRINGFIELD BUSES

Seating Capacity 15; Model 32. Worm drive; 1 1/2-ton Chassis; in first class condition. Would make good trucks. Will sell one or all. Address

**F. M. SHIPMAN**

350 Halsey St., NEWARK, N. J.

### PATENTS PROCURED BY A FORMER EXAMINING OFFICIAL

Automobile Division  
United States Patent Office  
**NORMAN T. WHITAKER**  
430 Whitaker Bldg. Washington, D. C.  
Inquiries Invited

### PATENTS

Inventors Invited to Write for Information and Particulars.  
Highest References. Best Results.

Promptness Assured.

**WATSON E. COLEMAN**

Patent Lawyer  
634 F Street N. W. WASHINGTON, D. C.

### C. L. PARKER

Formerly Member Examining Corps, United States Patent Office.

**ATTORNEY-AT-LAW AND SOLICITOR OF PATENTS.**  
American and foreign Patents secured. Searches made to determine patentability and validity. Patent suits conducted. Pamphlet of instruction sent upon request.  
McGill Building, WASHINGTON, D. C.

### MANUFACTURER'S AGENT

will be glad to hear from auto specialties firms with regard to the sale of their goods in Canada. Will call on jobbers or dealers.

**EMILE SCHWARTZ**

Room 33 Molsons Building MONTREAL, CAN.

### Situations Wanted

#### CAN PRODUCE RESULTS

Sales Manager wants to connect with live concern. 8 years' selling and managerial experience; at present branch manager for tire company. Entirely familiar with direction of selling forces; thorough first hand knowledge of credits, collections, correspondence and office management. Can make any good proposition pay. Make replies definite. Address Box X-301, care MOTOR WORLD, 239 W. 39th St., New York City.

**ATTENTION—Position seekers.** Any man looking for a good connection in the motor car field should seriously consider giving this paper the opportunity to locate the desired job, especially at rates quoted, which are about one-half the classified rates. We will write your advertisement free of charge on receipt of full information as to your experience, age and any other information which will help us to make up for you an attractive advertisement. Situation expert, Classified Advertisement Department, MOTOR WORLD.



# MACHINERY SECTION

Lathes, Shapers, Drills and all  
Garage Machinery a specialty  
THE OSBORNE & SEXTON MCHY. CO.  
COLUMBUS, OHIO

## ALL KINDS OF MACHINERY

is worth today good money.  
What have you to sell?

Motor World Classified Col-  
umn reaches the buyer.  
Try it for Results.

ESTABLISHED 1876

WAREHOUSE &amp; SIDINGS, 942 BEACH

## FRANK TOOMEY, Inc.

Iron and Wood Working Machinery, Steam  
and Electrical Equipment and Supplies.

*Large Stock of New and Second-Hand Garage Equipment*

Lathes  
Drills  
Shapers  
Planers

Gear Cutters  
Air Compressors  
Motors—all sizes.  
Arbor Presses  
Large Presses

Milling Machines  
Grinders  
Hack Saws  
Turret Lathes

MAIN OFFICE 127-131 N. THIRD ST.

PHILADELPHIA, PENNA

## WANTED MACHINERY

Any garage, machine or repair shop with machinery on hand that is out of service for one reason  
or another will find a ready market and secure good prices through Motor World's Classified Columns.  
Tell us what you have.

Classified Adv. Department, Motor World

## Your Patented Automobile Accessory Manufactured

Many practical accessories are never placed on the market, due either to lack of manufacturing facilities,  
merchandising organization, or capital.

There are many automotive concerns prepared to consider and take hold of worth-while opportunities.

It is the work of this Department to bring these interests together.

There is no charge for this service.

Send blueprints, specifications and full information as to the kind of material and manufacturing equipment  
necessary to manufacture the article in question.

It is also important that you state whether you are in a position to finance the proposition, or if it is to be  
manufactured on a royalty basis.

For co-operation along the above lines, address

MOTOR WORLD

Service Department, Contract Work, 239 WEST 39th STREET, NEW YORK CITY

# Culver-Stearns Manufacturing Co.

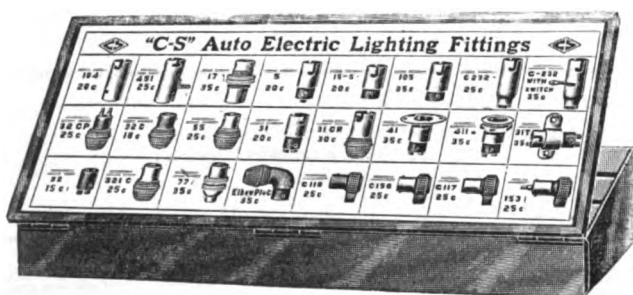
DETROIT  
Mich.

WORCESTER  
Mass.

## Sales Agents

J. H. Faw, Inc. Eastern and Southern U. S.  
Brown & Caine Chicago  
Manuel Bergman New York  
M. A. Bryte San Francisco

## C-S Auto Electric Lighting Fittings Cabinets



## C-S Display Cabinet

THIS cabinet makes an ideal "Silent Salesman" for the Dealer and Garageman. It does not take up much room and is attractive in appearance. Shows full size illustrations of what it contains. Catalogue numbers and selling prices are plainly marked and it also has a locking device.

This Display Cabinet is given free with our standard assortment of fittings.

Each		Each
No. 32 Plugs, \$ .15	No. 41 Receptacle, \$ .30	
No. 32-C Plugs, .18	No. 411 Receptacle, .35	
No. 321-C Plugs, .25	No. 31-T Receptacle, .35	
No. 55 Plugs, .25	No. 17 Receptacle, .35	
No. 77 Plugs, .35	No. 451 Sockets, .25	
No. 32 C. P. Plugs, .25	No. 104 Receptacle, .20	
Elbow Plugs, .35	No. G-232 Sockets, .25	
Angle Plugs G-117, .25	No. G-232-S Sockets, .35	
Angle Plugs G-118, .25	No. 105 Receptacle, .35	
Angle Plugs G-153, .25	No. 15-S Sockets, .20	
Angle Plugs G-156, .25	No. 5 Sockets, .20	
No. 31 Receptacle, .20	Caps, .05	
No. 31 C. R., .25		

This assortment carries plugs, connectors and sockets suitable for replacement on practically every make of car.

## Advertisers' Index

THE ADVERTISERS' INDEX is published as a convenience and not as a part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.

A	L
Acheson Graphite Co.....104	Defender Auto-Loch Co.....103
Advance Packing & Supply Co..... 92	Detroit Accessories Corp..... 98
Af-ford-Able Motor Truck Co..... 87	Dunn Counterbalance Co..... 88
Ahlberg Bearing Co.....101	Dyneto Electric Co.....104
Ajax Rubber Co..... 83	
Albertson & Co.....100	
Alsop Triple Ignition Corp..... 98	
Aluminum Bracing Solder Co.....103	
American Chain Co.....104	
American Cushion Spring Co..... 98	
Anderson Motor Co..... 80	
Anthony Co. ....102	
Apco Mfg. Co.....111	
Atwater Kent Mfg. Works.....100	
Automobile Dealer of N. Y..... 77	
B	E
Bay State Pump Co..... 98	Eisemann Magneto Co..... 71
Bell Motor Car Co.....102	Empire Rubber & Tire Co.....111
Bergie National Spark Plug Co.....101	
Bethlehem Motors Corp.....104	
Big Auto Tractor Co.....104	
Black & Decker Mfg. Co..... 98	
Blake Signal & Mfg. Co.....102	
Bonney Vice & Tool Co..... 98	
Boech Magneto Co..... 58	
Bound Brook Oil-less Bearing Co..... 61	
Bower Roller Bearing Co..... 62	
Brown-Lipe-Chapin Co. ....76	
Brown Mfg. Co., J. W..... 90	
Brunner Mfg. Co..... 90	
Bunyan Signal Light Co..... 91	
Burd High Compression Ring Co.... 90	
C	F
Campbell Auto Works.....102	Faw, Inc., J. H.....110
Carrier Motor Truck Co.....102	Federal Motor Truck Co..... 90
Case T. M. Co., J. T..... 75	Firestone Tire & Rubber Co.....102
Cassidy Co., E. A., Inc.....101	Flak Rubber Co..... 2
Champion Ignition Co.....58-59	Flint Varnish & Color Works..... 74
Champion Spark Plug Co....Front Cover	Foreign & Domestic Auto Supply Co.....102
Chase & Co., L. C.....100	France Mfg. Co.....104
Chicago Pneumatic Tool Co..... 85	
Chicago Solder Co..... 97	
Christensen Engineering Co.....54-55	
Clearing House .....105	
Cleveland Tractor Co.....102	
Clover Mfg. Co..... 53	
Coe-Stapley Mfg. Corp..... 68	
Collier Motor Truck Co.....103	
Connecticut Tel. & Elec. Co..... 4	
Cooper Mfg. Co.....100	
Crew Levick Co.....102	
Curtis Pneumatic Mch. Co..... 90	
D	G
	Gill Mfg. Co..... 98
	Globe Mfg. Co.....100
	Goodell Pratt Co.....104
	Goodrich-Lenhart Mfg. Co..... 83
	Greb Co. ....102
	Greenfield Tap & Die Corp..... 88
	Grundy Mfg. Corp.....104
	Guarantee Liquid Measure Co..... 57
H	I
Halladay Co., L. P..... 97	
Hall-Thompson Co.....111	
Harrison Radiator Co..... 96	
Hartford, E. V., Inc.....101	
Heinze Co., J. O..... 94	
Hill Pump Valve Co.....Second Cover	
Hobart Brothers Co..... 96	
Holmes Bros., Robt.....102	
Hotel Hollenden ..... 97	
J	K
Jenkins Vulcan Spring Co..... 83	
Jorgensen Mfg. Co..... 84	

# Advertisers' Index

THE ADVERTISERS' INDEX is published as a convenience and not as a part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.

## K

Kales Stamping Co.....103  
Kallogg Mfg. Co.....104  
Kelly-Springfield Tire Co.....96

## L

Laidlaw Co. ....104  
Laminated Skin Co.....6

## M

Machinery Section .....100  
Metal Auto Parts Co.....101  
Metal Hose & Tubing Co.....90  
Metal Specialties Mfg. Co.....112  
Munger Piston Ring Co.....78  
Muttly Co., L. J.....81

## N

National Wire Wheel Works.....90  
New Departure Mfg. Co.....3  
New Era Spring & Specialty Co.....90  
New Process Gear Corp.....98  
New York Coil Co.....94  
Nordyke & Marmon Co.....100

## O

Ohio Trailer Co.....104  
Oneda Motor Truck Co.....98  
Oshkosh Motor Truck Mfg. Co.....103

## P

Parish & Bingham Co.....102  
Perma-loc Mfg. Co.....83  
Plunkett Shock Absorber Co.....102

## R

Racine Rubber Co.....86  
Raybestos Co. ....104  
Roedding Signal Tail Light.....104

## S

Schaap Automobile Co.....101  
Schutte Body Co.....101

Shaler Co., C. A.....70 and 98  
Sheldon Axle & Spring Co.....85  
Sparks-Withington Co. ....103  
Staybestos Mfg. Co.....99  
Stevens & Co.....103  
Stifel & Sons.....90  
Storm Mfg. Co.....100  
Stromberg Motor Devices Co.....101  
Studebaker Corp. ....52  
Sunderman Corp. ....104  
Swinehart Tire & Rubber Co.....96

## T

Tungsten Mfg. Co.....1  
Twichel Gauge Co.....97

## U

United Engine & Mfg. Co.....85  
United Smelting & Aluminum Co....98  
U. S. Ball Bearing Mfg. Co.....99  
U. S. Light & Heat Corp....Back Cover  
Universal Industrial Corp.....104  
Universal Mfg. & Sales Corp.....98  
Universal Tool Co.....93

## V

Vanderpool Co. ....98

## W

Waltham Watch Co.....51  
Watson Wagon Co.....94  
Western Vulcanizer Mfg. Co.....92  
Weston Electrical Ins. Co.....100  
Whitman & Barnes Mfg. Co.....87  
Willard Storage Battery Co..102 and 104  
Williams Foundry & Machine Co....79  
Wire Wheel Corp. of Am..Third Cover

## Y

Young Industries Co., L. A.....102

## Z

Zenith Carburetor Co.....103

APCO

## EQUIPMENT FOR FORD CARS



### TIMER

The regulation type of timer will give about one thousand miles of perfect service after which it is subject to troubles that are hard to locate and impossible to correct except by installing a new timer.

The Apco Timer will give 100% perfect service during its entire life with only one possible source of trouble, a broken spring, which can be located instantly and replaced in five minutes at a cost of five cents.

*Less than one-tenth of one per cent of the Apco Timers develop spring trouble—think it over.*

**Prices on Request**

*Sold by jobbers exclusively*

**Apco Manufacturing Company, Providence, U. S. A.**

**You have calls for something to start cold motors; you'd have many more if customers knew you had "Flash."** Flash starts motors on the coldest Winter days—and these are the days it sells.

Flash Starting Fluid is a new

## WONDER



Specialty that starts any engine the first turn over. It makes no difference how low the temperature, or how poor the gasoline—Flash will get action!

Flash saves the batteries of the self-starter for the man who owns the big car, and it saves the struggle of cranking for the man who owns the Ford. Requires only a few drops squirted through pet cocks or spark plug openings.

*Ask for catalogue of the other WONDER-WORKER Specialties when you write in for quotations on "FLASH." The WONDER-WORKER line offers you many such leaders.*

**THE HALL-THOMPSON CO.**  
HARTFORD, CONNECTICUT

When writing advertise please mention Motor World—it identifies you

# Presto

## WINTER PRODUCTS



**PRICE \$4.00**

The most economical means known of keeping the engine warm. The Presto Heater saves coal as it makes it unnecessary to heat entire garage.

### ORDER NOW

Every article is a winter necessity and boosts profits during the winter months. Don't allow business to slow up from now on. Sell Presto Winter Products. Get your order in now before the heavy snows and severe, cold weather.

### Electric Heater]

At night simply screw the plug into the nearest electric light socket, put the Presto Heater under the hood and be assured of a warm and easy starting engine in the morning.

### Three Big Features

**Easy Starting**—Keeps the engine, manifold and radiator warm during the night, making starting as easy as in warm weather.

**Safety**—There is absolutely no danger of fire, as where flame heat is used.

**Economy**—Delivers the heat exactly where it is wanted—inside the hood. It is far cheaper to heat the engine than to heat the entire garage.

### All Weather Protector for Ford Cars

A Ford necessity in winter. Prevents cold air from entering through the pedal slots in the foot boards.

**For \$1.75 you can be comfortable all winter.**

### Body Brace for Ford Cars

Stops vibration—avoids sagging of running boards and prevents breaking away from fenders—prevents broken springs—prevents uneven strain—holds drive shaft in position—holds all mechanical parts in alignment—equalizes spring action—easily installed, no holes to drill, no mechanic necessary.

**Price only \$3.50 in U. S. A.**

**Except west of Rockies, \$4.00  
In Canada, \$6.00**

**DEALERS**—These three products that have proved so popular are representative of the Presto line of over 100 motor car specialties.

*Write for Details*

**METAL SPECIALTIES MFG. CO.**

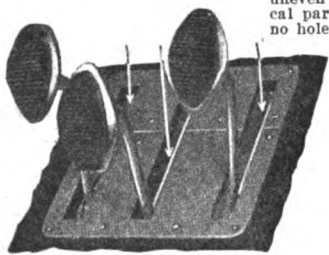
338-352 N. Kedzie Ave. .... Chicago

**Eastern Branch**

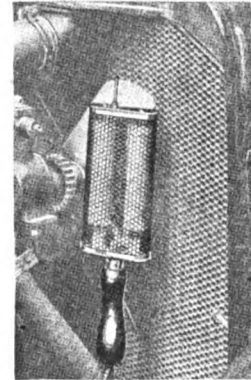
16-24 West 61st Street. .... New York

**Western Branch**

149 New Montgomery St. .... San Francisco



No cold air can rush up to keep the driver's feet cold and make the whole car chilly.



A handy hook is a new feature of the Presto Heater. It can be hung any place near the radiator or carburetor. Keeps entire engine warm.

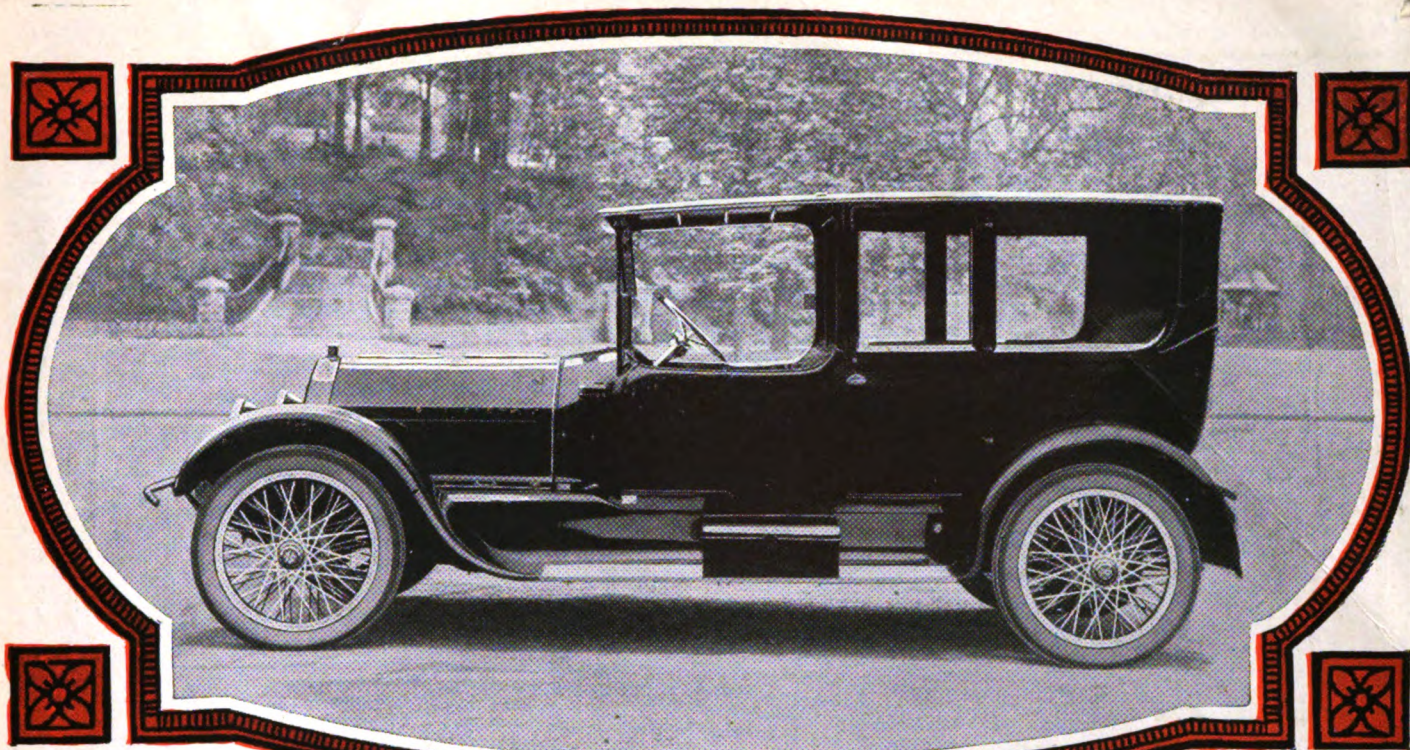


Showing underside construction of the Presto All Weather Protector for Ford cars.



BODY BRACE FOR FORDS





# HOUK

QUICK CHANGE

## The Wheel of Ease, Strength and Elegance

Even the most costly cars acquire an added air of elegance from Houk Wire Wheel equipment. The quality of style, luxury and elegance gained from these graceful wheels, however, is not more important than the practical benefits they give—instantaneous tire change, greater resilience, longer tire life and increased mileage.

Any make or model of car may be Houk equipped at the service stations listed below. Booklet will be mailed on request.

WIRE WHEEL CORPORATION of AMERICA

(Successors to Houk Manufacturing Co.)

835 Eleventh Ave., at 57th Street, New York

DIRECT FACTORY BRANCHES  
AND SERVICE STATIONS:

Philadelphia, 328 North Broad Street  
Chicago, 23rd and Indiana Avenue  
Detroit, 16 Davenport Street  
Los Angeles, 1216 South Grand Avenue  
San Francisco, 1690 Pine Street

Exclusive Canadian Representatives:  
DUNLOP TIRE & RUBBER GOODS CO.  
Toronto

# HOUSE

for Fords

List price for set of 5  
wire wheels, 4 inner  
hubs, 4 hub caps, hub  
cap wrench, spoke  
nipple wrench, one hub  
dust cover for spare  
wheel, \$65. White,  
black, red. Colors  
optional.

# \$65

# WIRE WHEELS





storage **USL** batteries  
U S LIGHT & HEAT CORPORATION

## Inspected and Tested at the Factory —

*From these traveling conveyors come a never ending stream of USL Batteries with the exclusive machine-pasted plates.*

The "USL Dry Storage" method completes the battery at the factory—down to the final charge, inspection and test. Then the electrolyte is drawn off and the battery sealed air tight and shipped.

The USL Service Station fills the battery with electrolyte, gives it a freshening charge and the car owner drives away with a factory perfect, 100% brand new battery.

### "USL DRY STORAGE" *Perfect Service Insurance*

"USL Dry Storage"—"Exclusive Machine Pasted Plates"—"Sold on a 15 months guaranteed adjustment plan"—this is the trio that gives the best service to the car owner.

*If you are considering the Battery Business write for information that tells you why USL dealers are sure to get a large volume of the Battery Business in their territories.*

**USL Light & Heat Corporation**  
**Factory: Niagara Falls New York**

*Branches in New York, Detroit, Chicago, Kansas City, San Francisco, Washington, D. C.*

*USL Batteries are sold on a 15 months' guaranteed adjustment plan.*













MAR 26 1935



